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A

TREATISE
ON THE
DISEASES and LAMENESS
OF
HORSES.

In which is laid down a proper
Method of SHOEING (in GENERAL)

AND
Treating the different Kinds of FEET.

To which are added,
Some New OBSERVATIONS
In the ART of FARRIERY,
AND ON THE
Nature and Difference of HORSES.

SH E W I N G
On what Principles their PERFECTION depends,
and by what Methods their BREED may be
greatly improved and amended.

By W. O S M E R.

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TREATISE

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The

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May it please your MAJESTY.

THAT happy encouragement, which arts and literature continually receive from your royal protection, emboldens me to lay this Treatise at your feet.—Permit me then, most gracious Sir, as some kind of plea for thus approaching your Majesty's presence, to assure you, that this Treatise is the result of many years consideration, and that its doctrine is confirmed by observation and experience.

The author humbly hopes too, that he hath pointed out some efficacious remedies for those two dreadful evils, the bite of a mad dog, and the distemper amongst the horned cattle, which have hitherto baffled all human skill, and which are treated of in this Book.

And in order to extricate the science of farriery from the hands of the ignorant and illiterate, the author, who was bred a surgeon, together with his brother, who has spent the best of his days in the service of his King and country, as a surgeon in the royal navy,
and

and who is obliged to quit it on account of
his health, have undertaken the cure of
horses in their various complaints—and of
having them shod in the most proper manner.

They therefore humbly hope to meet with
such encouragement from your Majesty, and
the publick, as may induce them to carry
on an undertaking, they are willing to think
of some advantage to the community.—

By which it is presumed, this most noble
animal, so much connected with the pleasures,
use, and necessities of mankind, will be
treated at least in a rational manner, and the
science of farriery be brought to some per-
fection—it being impossible, for any progress
to be made therein, but by men, who are
enabled from their education, to acquire a
competent knowledge of the nature, use,
and structure of the parts belonging to this
animal.

Your MAJESTY'S

most humble, most obedient, and

most devoted Subject and Servant,

W. O S M E R.



They therefore humbly hope to meet with
 such encouragement from your Majesty, and
 the publick as may induce them to carry
TREATISE, &c.

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CHAP. I.

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 science of farriery be brought to some per-
On SHOENING.

fection, in which, by men, who are
 to be made thorough, but by men, who are
 to be made thorough, to acquire a
Sub Judice Lis est.



I AM afraid the people who
 profess the art of shoeing
 will be much offended
 with this chapter, and
 hold it very cheap, because it proposes
 to instruct them in this art.

W. OSMER **B** **If**

If you pretend to have your horse shod according to your own mind, it is a general saying amongst these men, that they do not want to be taught ; which is as much as to say, in other words, there is nothing known in their art, or ever will be, but what they already are acquainted with— And what is particular, there is not one of these artists, how much soever they differ in method, but gives the same answer, and has vanity enough to think, that he knows more than his neighbour—Vanity ! the noblest passion of the mind, the best, the kindest gift of heaven, given us to balance each human failing.

It has been a maxim amongst wise men of all ages, and has been said by twenty authors, or more, that nature does nothing in vain ; from the ob-

servation

servation of which truth, reasonable people have been apt to conclude, that nature should be the guide of all our operations.

Now, if you ask one of these artists his reason for acting in this or that particular manner, or should enquire of him the use of any part, assigned to some particular end, he can give no answer, nor even pretends to have any knowledge thereof, but is guided by custom alone.

Hence reasonable people will also conclude, that many errors have arose in the execution of this art, and that these artists should not think themselves aggrieved, by any information they may receive from any hand.

Be that as it will, my intent is to explain the proper manner, original
 B 2 design,

design, use, and abuse of shoeing, as clearly and concisely as I can, so that every man of common capacity may be able to judge for himself in this matter.

When time was young, when the earth was in a state of nature, and turnpike roads as yet were not, the horse needed not the assistance of this artist; for the Divine Artist had taken care to give his feet such defence as it pleased him; and who is weak enough to suppose, His wisdom was not sufficient to the purpose in such a state.

But to prevent all supposition and cavilling on this matter, let us only appeal to our senses, and we may every day see horses, mares, and colts, running about on all sorts of ground unshod, and uninjured in their feet.

In

In many parts of the world to this day, even on the most rocky ground, horses are accustomed to carry their riders unshod ; and in this kingdom I have known several horses rode for a considerable time unshod, on the turnpike roads about London, without any injury done to their feet.

And, I believe, there are many horses, that might travel their whole life-time unshod, on any road, if they were rasped round and short at the toe ; because all feet, exposed to hard objects, become thereby more obdurate, if the sole be never pared. And some by their particular form, depth, and strength, are enabled to resist them quite, and to support the weight without breaking.

But

But because there always was a great difference in the texture of horses feet, mankind (after certain periods of time, when the face of the earth became changed) added another defence, besides the natural one, to preserve the crust of such feet as were weak, and not so well able to support them against new and hard objects.

From the good of this practice, tried and discovered on particular kinds of feet (though perhaps but a partial good) it is no wonder, that the custom of putting shoes on all kinds of feet became general.

Our ancestors, the original shoers, proposed nothing more, I dare say, in their first efforts, than to preserve the crust from breaking away, and thought themselves

themselves happy they had skill enough
 so to do—the moderns also are wisely
 content with this in the racing way.

But, in process of time, the fertility of invention, and the vanity of mankind, have produced variety of methods, almost all which are productive of lameness; and I am thoroughly convinced, from observation and experience, that nineteen lame horses of every twenty in this kingdom, are lame of the artist, which is owing to the form of the shoe, his ignorance of the design of nature, and male-treatment of the foot, every part of which is made for some use or purpose—tho' he does not happen to know it.

But waving all these modern artists know, or do not know, I suppose it will be universally assented to, that whatever method of shoeing approaches nearest
 to

to the law of nature, such is likely to be the most perfect method ; and as the feet of different horses differ from each other, so, if we would arrive at any perfection in this art, the human reason must be employed, in discovering and ascertaining wherein their difference consists, that each may be treated according to its nature—And yet with respect to each, and all, some general rules may be still allowed.

For the sake of those, who may be unacquainted with horses feet, and for their instruction, I shall describe such parts only of the foot, for the present, as offer themselves to our view, and come under our cognizance, as the immediate and principal objects of care, when intended to be shod.

These are the outer sole, the crust which like a wall surrounds it, the frog,

frog, and bars one on each side, and the spongy, skin-like substance which covers the hinder and cellular part of the foot, and is continued to the heel of the horse.

With respect to the treatment of some of these, the *Sieur la Fosse* (to whom the World is indebted for many ingenious observations) has already laid down some Rules—And though I dare say every man, who has tried his method of shoeing, is convinced of its impropriety, I mean as a general method, yet some useful hints may be gathered from his doctrine, and the good and evil of his shoe shall be spoken of hereafter.

He says, the sole should never be pared ; his reason is very obvious and just ; namely, that the sole, not pared,

C

acquires

acquires a great degree of firmness and Obduracy, whereby it is better enabled to resist all extraneous bodies, such as Glass, Nails, Flint, &c.

There is another reason equally obvious, which is, that the wisdom of the Creator intended this outer sole, and its obduracy, as a natural and proper defence to the inner sole, which lies immediately under the other, between that and the bone of the foot — This inner sole being nothing else but the expansion of one of the flexor tendons of the leg, which is continued to the bottom of the foot, and overspreads the bone thereof.

This tendinous expansion, when the outer sole is pared, and the animal put into violent motion, is, for want of its defence, susceptible of great pain, consequently liable to great Inflammation ;

[II]

flammation ; and from this cause many a horse has been rendered lame for ever.

If it be asked, what becomes of the sole when not pared ? it dries, separates, and scales away.

La Fosse has also said, the frog should never be pared ; his reason is, that the frog, being united to that tendon of the leg which is continued down to the bottom of the ~~sole~~ (all *Foot* which tendons are unelastick bodies) is itself an elastick body, is placed there as a proper point of support, and serves as a basis, to relieve this tendon at each step or motion.—But if the frog be pared, it cannot be admitted to touch the ground ; for want of which support, the tendon is elongated and strained, hence frequent lameness of this tendon is occasioned ;

and from this cause also Windgalls are most frequently produced.

I know there are many people who maintain tendons to be elastick bodies, but it is a ridiculous and vulgar error; for all tendons or muscles are confined to their proper sphere of acting; and from hence it will follow, that if they were elastick, the force of any muscle (part of which is tendinous) would be eluded, before such tendinous part could act on its proper object.

Moreover every man's eye will shew him, that tendons are not elastick, from their loose uncontracted figure, which is easily to be perceived in the hinder leg of the horse, when he moves gently.

There

There are other reasons why the frog should not be pared.

If admitted to touch the ground, it helps to stop the horse from sliding, as the figure of it will plainly evince.

The frog, together with the bars, occupying the hinder part of the foot, is designed by nature to distend and keep it open, which, when cut away, suffer the heels, the quarters, and the coronary ring to become contracted, whereby another lameness is produced, which shall be treated of in its proper place.

The bar is that part situate between the heel, the frog and the quarter on each side, and is not to be scooped out according to the general custom, for the reason last mentioned, because,
together

together with the frog, its use is to keep open the hinder part of the foot, as well as to defend it.

The spongy, skin-like substance is not to be cut away till it becomes raggy, because it is the expansion of the skin round the heel, its use being to unite more firmly the foot and its contents, and to keep the cellular part of the heel from growing rigid; it also surrounds the coronary ring, and may be observed to peel, and dry away as it descends on the hoof.

These are general rules to be observed, with respect to every kind of foot.

But because la Fosse has said, the sole and frog should never be pared, many of our countrymen, mistaking his meaning, have fallen into another extreme,

extreme, and so have not pared the foot at all.—Yet it is necessary, that the crust of all horses which are shod, should be pared more or less, according to its different degree of strength.—But no general method can be laid down in this respect, because the nature of feet differ greatly from each other, by which alone the artist is to be guided.

And to prove this necessity of paring the crust, it is to be observed, that the superficies of the crust of every foot, whereon the shoe rests, becomes rotten in a few weeks ; so that if a new shoe be set upon an unsound foundation, it will not stand firm or long — The crust also, in such case, will shell or break away.

Now where the foot is deep and hollow, the crust is generally thick and

and strong, this cannot be pared down too low (so as not to fall into the quick) because the strength of the crust alone will occasion such a compression on the interior parts of the foot, as to produce a lameness, which will be shewn in its proper place.

In all broad fleshy feet, the crust is thin, and should therefore suffer the least possible loss.—On such feet the rasp alone is generally sufficient to make the bottom plain, and produce a sound foundation, without the use of the desperate Buttreffs.

And thus each kind of foot is to be treated, according to its different degree of strength or weakness.

The superficies of the foot round the outside, now made plain and smooth, the shoe is to be made quite flat,

flat, of an equal thickness all round the outside, and open and most narrow backwards at the extremities of the heels for the generality of horses,—those whose frogs are diseased, either from natural or incidental causes, requiring the shoe to be wider backwards;—and to prevent this flat shoe from pressing on the sole of the horse, the outer part thereof is to be made thickest, and the inside gradually thinner.

In such a shoe, the frog is admitted to touch the ground, the necessity of which has been already shewn;—add to this, the horse stands more firmly on the ground, having the same points of support, as in a natural state.

Here now is a plain, easy method, agreeable to common sense and reason, conformable to the anatomical

D . structure

structure of the parts, and therefore to the design of nature.—A method so plain, that one would think nobody could ever swerve from it, or commit any mistake in an art, where nothing is required, but to make smooth the surface of the foot, to know what loss of crust each kind of foot will bear with advantage to itself, and to nail thereon a piece of iron, adapted to the natural tread of the horse; the design, good, or use of the iron, being only to defend the crust from breaking, the sole wanting no defence, if never pared.

If we now examine the present method of shoeing, by comparing it with what has been already said, we shall easily perceive its sad effects, which shall be the subject of the ensuing chapter.

C H A P.

C H A P. II.

Is relative to the First.

NOW the modern artist uses little difference in the treatment of any kind of foot ; but with a strong arm, and a sharp weapon carries all before him, and will take more from a weak-footed horse at one paring, than nature can furnish again in some months, whereby such are rendered lame.

If a strong-footed horse, with narrow and contracted heels, be brought before him, such meets with treatment yet more severe ; the bar is scooped out, the frog trimmed, and the sole drawn as thin as possible, even to the quick, under pretence of giving him ease ; because, he says, he is hot-footed

or foundered.—By which treatment, the horse is rendered more lame than he was before, as I shall immediately shew.

In the interior part of the foot, (which few or none of these artists have ever examined, at least to little purpose) there is a broad cartilage annexed to each superior end, or corner of the foot-bone; there is also a small bone, called the nut-bone, placed transversely in the foot, between the bone thereof and the coronary bone; the ends of which are articulated to the inner sides of the foot-bone, which ends are also cartilaginous; and from the situation and concern of these in all motion, it is necessary they should be of a cartilaginous, and pliant, or yielding nature.

Now

Now when this same foundered foot (as it is called) is robbed of those parts, which were designed to keep it open, the heels and the coronary ring become more contracted than they were before; by which means these cartilages of the foot-bone are more compressed. All the membranes and tendinous expansions of the foot are compressed and inflamed, and the cartilaginous ends of the nut-bone, together with the ligaments, are squeezed as in a vice.

And it is to be observed, that whenever the heels of the horse are deep or narrow, and there is a stricture round the coronary ring, such feet are generally more or less lame, after some use, and that merely from the compression above named.—The truth of which will be more readily conceived by

by examining the interior structure of the foot.

But the modern artists, not content with ruining and destroying the work of Providence, seem resolved, that all their operations shall be of a-piece, and in every thing act by contraries.—And, to prove this, I shall demonstrate, that the shoe commonly made use of, is contrary to sense and reason, as well as to the natural tread of the foot.

It is to be understood, that no horse can go, if the shoe rests upon the sole ; and to avoid this evil, the modern shoe must be formed, and stand concave ; because the modern shoe is made thinnest on the outside, and thickest on the inside.

Mark

Mark now the inconveniences arising from the unequal surface of such a shoe.

The horse, having fewer points of support, is more liable to blunder, to strain the tendons, injure the cartilages and ligaments, break the bones of the foot, and to dislocate some of the joints of the fore part.

The weight of the horse bears chiefly on the inner side of this shoe, which is the highest part ; so that the nails at the heel (when the horse comes to act) must break, or give way, or tear the crust ; hereby the shoe gets somewhat loose, the finer sand insinuates itself between the foot and the shoe-heel, and the horse is according to our phrase gravelled ; perhaps, gets a corn, with which he is lame for life ;

no

no cure being supposed to be had for this evil.

In this kind of shoe, tho' the frog be not pared, it will be removed to such a distance from the ground, that it cannot be admitted to touch it ; by which intervention of the shoe the flexor tendon of the foot loses its support, as much as if the frog was actually pared.

Further, the heel of the horse is corroded and eat away, and the crust more liable to be broke ; nevertheless, these men are obstinate and weak enough to affirm the contrary, and give it as a reason for making the outside of the shoe thinnest, not perceiving the consequence of such unequal pressure on the crust.

Having

Having now proved, that variety of lameness is produced by a wrong method of shoeing, I shall leave what has been said to the consideration of the reader ; the truth of which, observation and experience will make manifest.

C H A P. III.

Contains some further Observations on Shoeing.

LET the shoe on every horse stand wider at the points of the heels than the foot itself ; otherwise, as the foot grows in length, the heel of the shoe in a short time gets within the heel of the horse ; which pressure often breaks the crust, produces a temporary lameness, perhaps a corn.

E

Let

Let every kind of foot be kept as short at the toe as possible, (so as not to affect the quick) for by a long toe, the foot becomes thin and weak, the heels low, and the flexor tendons of the leg are strained ; the shortness of the toe helps also to widen narrow heels.

In all thin weak-footed horses, the rasp should be laid on the toe in such a manner, as to render it as thick as may be ; by which means the whole foot becomes gradually thicker, higher, and stronger.

In all feet, whose texture is very strong, the rasp may be laid obliquely on the fore part of the foot towards the toe, and the toe itself thinned, whereby the compression on the parts is rendered somewhat less, by diminishing

minishing the strength of the hoof or crust.

But this rasp is to be used with discretion, least the crust being too thin, and not able to support the weight of the horse, a sand-crack ensue; which frequently happens, from too free, or unskilful use of this tool, and from the natural rigid texture of the coronet.

The heel of the shoe, on all strong and narrow-heeled horses, should be made strait at the extreme points; the form of the shoe in some measure helping to distend the heel of the horse. For the same reason, the shoe on no horse should be continued farther than the point of the heel.

It has been said already, that neither frog or sole should ever be pared;

nevertheless, it must be understood, that it is impossible to pare the crust, without taking away some of the adjacent sole, and it is also requisite, in order to obtain a smooth and even surface, so far as the breadth of the shoe reaches, and no farther.

The frog also will become ragged, and loose pieces will occasionally separate from the body thereof, perhaps in one foot, and not in the other. When this happens, it should be cut away with a knife, to prevent the gravel lodging therein. But if it be left to the artist to do, he will be sure to take away more of it at one time, than will grow again in many weeks. —The inferior point of the same, towards the toe, should also be taken down, in some kinds of feet, where it grows high.

La Fosse has given us a caution against the use of cramps, or what in England we call corking; that is, turning up the shoe at the points of the heels.

He says, that the frog being hereby removed to a great distance from the ground, the tendon will be inevitably ruptured;—but this is true only in part.—In the summer-time, when the ground is dry and hard, I think this effect would frequently happen, especially if the horse was rode hard.—But in the winter-time, when the ground is wet, this cannot happen in a flat shoe; because the corking of the shoe-heels is then buried in the ground, so that the frog is still admitted to touch the ground, and to rest thereon.—And it is necessary that all sportsmen, who hunt on hilly or
 slippery

slippery countries, should have the shoe-heels turned up in the winter-time, especially the hinder ones, for the security of their persons, and the fore shoes also, if they like it, without danger of laming the tendons, for the reason above given.

This method of treating the foot, and such a kind of shoe as has been described, I have used many years ; and, to the best of my remembrance, have not had a horse lame since, except when pricked by the artist ;—and it is a matter of the greatest astonishment to me, how any other form of a shoe could ever come into general use. Yet no particular method of shoeing whatsoever can take place ; and this will happen from the different nature, form, and texture of horses feet : but the prejudices of mankind, on all these occasions, may be worth
 remarking

remarking.—One man invents a new piece of machinery, which he finds to be very useful in many respects.—His pride and partiality would fain have it extend to all purposes. In this light he recommends it to his neighbour, who tries it, and having found it not answer his particular purpose, he falls into the other extreme, and declares it to be good for nothing.—Hence that which may contain many virtues, when used with judgment, becomes neglected, and is, perhaps, totally thrown aside ; and hence the perfection of some arts is less extensive.

Now this flat shoe is not to be made with a smooth surface, after the French manner, but channelled round, or what is called fullered, after the English manner ; by which the horse is better prevented from sliding about, and the heads of the nails are less liable

able to be broke off ; both which inconveniences attend the shoe whose surface is smooth.

But so ignorant are these our artists, (who do not want to be taught, or, in other words, know every thing) that not one in twenty of them can make these flat shoes, tho' a pattern lies before them, for which reason they generally dislike and condemn them.

It has hitherto been thought a difficult matter to prevent horses from cutting ; nevertheless, it is generally very easy.

Whoever will be at the trouble of examining the feet of such horses as are accustomed to cut themselves, will at all times, and in all horses, find the cause to be the same ; namely, to turning out their toes.

From

From hence also the necessity of boots, and bolsters, and bandages, round the fetlocks of half the horses that are trained at Newmarket, to prevent knocking their joints together.

Now the colt standing to graze with an out-stretched foot, which is no uncommon posture, rests chiefly on the inside of it, by which means that part is worn lowest; this is disregarded; and, by a habit of standing, the toe grows outward, and he becomes crooked from the fetlock joint downwards.

It may perhaps be said, that this habit of turning out the toe is entailed by nature; but whether it be natural, or acquired; the true cause of it is still the same in all horses, and depends on nothing else, but the inside heel being lower than the outside.

And to prove this doctrine, as soon as you perceive the colt's toe turning out, pare down the outside of the foot as much as you can ; repeat it as often as the foot will allow, and let the inside alone ; so will he grow strait on his legs and feet, and never cut or knock himself about when he comes into use.

This method will also prevent grown horses from cutting, if the crust of the foot be strong enough to bear a sufficient loss ; if not, the substance of the iron may be made thicker for the inside of the foot, from the heel to the toe, than it is for the outside ; and where it is practicable, and shall appear necessary, both these methods may be used, and both will assist for the purpose.—I have rode a horse treated in this manner several years, and have
found

found but little inconvenience to his going, or to his feet, much depending in this case on the goodness thereof.

Such of the Dealers, who are masters of their business, use this kind of shoe to raise the inside of the horse's foot, and make him point, as they call it, or stand strait on his feet; and the chapman, who thinks he has bought a strait legged nag, is much surprized at the alteration he perceives in him, the first time he is shod in other shoes.

The crust should also be suffered to grow fullest on the inside of the foot, and the outer part thereof be rasped away as far as can be spared.

Nevertheless, the modern shoers, acting in all things by contraries, rasp

away as much as they can from the inner part of the feet.

CHAP. IV.

Wherein it will be proved, that Shoeing is but a partial Good.

IT has been said already, that all horses, whose feet are contracted round the hinder part, or whose crust is deep and strong, are generally more or less lame, when they have been shod and used any time, and that from a compression on the contents of the foot.

And no method of shoeing whatsoever will prevent the lameness of some such feet; and yet no man ever saw a horse (with this, or any other kind of foot)

foot) lame, but by some injury, or from too great a length of toe whilst he remained unbroke, and running about in a state of nature.

Now if ever La Fosse's shoe be useful, it is chiefly in this case ; for in such a shoe the heel of the horse rests in some measure upon the ground, receives some share of weight, and is, by means of such weight and pressure, kept open and expanded,—by which expansion of the heels, the compression on the interior parts of narrow-footed horses is removed, and he that was before lame is, by degrees, as the foot spreads, rendered sound,—if there be no disease in the interior parts of the foot.

Again, where horses have feet inclined to the other extreme, whose heels are weak and low, if the shoe be
set

set somewhat short at the points of the heel, such will, by degrees, improve, and grow higher.—Yet an English farrier can never be prevailed on to believe, that weak low heels will become stronger by leaving them exposed to hard objects.—But it must be expected that horses, with weak or diseased feet, who have been accustomed to go in long broad shoes, will at first go very lamely in shoes which are either short or narrow. And many that are lame of the shoer with various disorders in their feet, would be cured by La Fosse's shoes, if the frog, sole, and bars were not pared out.—But when those things which are designed by the Divine artist as a natural defence to the interior part, are cut away by the *Superior Wisdom* of our earthly artists, why then undoubtedly La Fosse's shoes won't do, for the horse requires some artificial defence, to supply the

loss

loss of the natural one. — Now it is the weight, unequal pressure, form and action of the iron, made use of to protect the foot when it is thus horribly abridged by our artists, that is productive of almost all the evils incident to horses feet.

So then for training, La Fosse's shoe will be proper for horses, whose feet are of too strong a texture, and for those which are too weak, or affected with various disorders; but for horses that have good feet, I would chuse to have the iron continued to the point of the horse's heel, but no farther; and for all horses that are used on training ground, the iron should be very narrow, little wider than a plate, without a wash, of a thickness sufficient to keep it from bending, according to the size and weight of the

the horse.—But my knowledge of the good and bad effects of the short shoe for horses used upon the road, even for such as are benefited by it on the turf, does not extend so far as to settle this matter—about which there are many disputes and contradictory accounts even amongst unprejudiced men.—All which accounts are, I dare say, very true, and amount only to this, that some horses can go upon the road in these, or without any shoes at all, and some cannot.

These are the advantages attending the short shoe; but if Mr. La Fosse was to ride a fox-hunting down the sides of our steep and slippery hills, I dare say he would not use them twice; for horses so shod, have, in this kind of work, great difficulty to stand at all; besides, from such slipping and sliding about, they are certainly more liable
to

to be lamed ; and from the inequality or sloping of the ground, that hunters go over in most countries, the tendinous fibres of the leg are, more or less, occasionally strained and elongated.—And this I can truly aver, having myself made the experiment, and lamed a horse in the tendons of both legs, the very first day of hunting him in these short shoes.

There are many men, who can distinguish these afs-footed horses, and pronounce with certainty the lameness thereof, even without seeing them move at all ; as readily as other men shall distinguish gold from silver, or lead from iron.

But because all men have not been attentive enough to make the same discoveries, some thro' ignorance, or prejudice to their own opinions, have

G

asserted

asserted and maintained other kinds of lameness, which do not exist at all; and talk of horses being chest-foundered, and shook in the shoulders, when the disorder is in the feet alone.

Wherefore know all men by these presents, that whosoever talks of horses being chest-foundered, or shook in the shoulders, is an ignorant pretender to the knowledge of this animal, and is himself shaken in the head.

Now, to prove the truth of this doctrine, and that shoeing is but a partial good, take this same narrow-heeled, or strong-footed horse (which, because it is fair to the eye, is perhaps called a very good one) pare down the crust as much as you can, cut the toe off round and short, and turn him out to grass bare-footed, he will become found in course of time, if the
interior

interior parts of the foot are not diseased.

The true cause of which is, that the foot not being confined in a shoe, the weight of the horse expands the same; the crust, and the stricture of the coronary ring, is relaxed by the dews and moisture, and the compression on the parts is removed.

And herein alone it is, that the unskilful are imposed on by the farrier, who (having done something to your horse, for what he calls a lameness in the shoulder, and ordered him to be turned to grass) vainly believes such soundness to be the effect of his remedy; and you, for want of better knowledge of the animal, are persuaded to believe the same.

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able to be trained, as well as other

'Take the same horses, whose feet by their open figure and relaxed state are become sound, confine them again in a shoe, keep them at house, in spite of all art some of them will become lame again, perhaps the first time of riding; especially if the weather be hot and dry, merely from the compression above-named.

Who now does not see the horrid barbarities of rowelling, blistering, nay, even boring the shoulders with a red-hot iron (under pretence of curing a lameness therein) committed on this most noble animal, by the obstinacy, pride, or folly of mankind.

Yet I would not be understood to mean, that there is no such thing as a lameness in the shoulder; because the muscles and ligaments thereof are
liable

liable to be strained, as well as other muscular and ligamentous parts.

But that no man may ever after be mistaken herein, I will lay down one unerring rule, whereby he may distinguish the reality of this disorder, without consulting the farrier at all; which is, that the horse, in this circumstance, always drags his toe upon the ground; for it is impossible that the horse can extend his foot to go on, without extending also the muscles of the shoulder, which act of extension he, to avoid pain, or from inability, does not chuse to have performed.

It appears also, from the nature of the articulation of the humeral-bone, with the scapula, or blade-bone, that such is capable of dislocation, either forward or backward; and there are many farriers in this kingdom, who pretend

pretend to have cured this dislocation, by the means of a patten-shoe put on the foot of the lame leg ; the truth of which they would attest on oath, perhaps, seal with their blood.

But a patten-shoe, in this case, must of necessity do harm instead of good ; because it will force the head of the humeral-bone further from its articulation with the scapula.

Since the first publication of this treatise, I have seen an instance of a dislocation of this bone in a horse, which was easily reduced by being immediately taken in hand, which puts this matter out of dispute ; I say dispute, because some of our learned writers on the subject of horses, have boldly said, such a dislocation cannot happen.—Which doctrine of theirs will serve to shew, how little such
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men are acquainted with that part of the anatomy of a horse, which relates to the nature of articulation.—And when this humeral-bone is reduced, it is very proper for the horse to wear a patten-shoe for some time afterwards, till the ligaments belonging to this joint have recovered their former strength.—Towards which the frequent use of vinegar will contribute as much as any application.

Now the proper method of reducing all dislocations is by making extension both ways.

By diseases arising from the contracted form of the feet, from consequent pain, and manner of standing in the horse, to ease these feet, the muscles of the shoulders occasionally waste away; and this is what is meant by the word chest-foundered, or shook

in

in the shoulders, which mistake arises from not understanding the nature of feet.—

And from the pain occasioned by a spavin, or other disorders in the joint of the hock, the muscles of the quarter will frequently waste away also; but it will be equally absurd in either of these cases to say, that the lameness of the horse is in the shoulder, or in the quarter; in both these cases the cause is the same; namely, pain, and habit of standing.—And yet from violence received on the shoulder, the muscular parts may waste away, in like manner as in the human species.

But to set this matter in the clearest light it is to be observed, that where both shoulders are wasted, you will readily perceive the cause of it in both feet; but if both feet are not concerned,

or

or one shoulder, only be wasted ; it is owing to some impression or violence upon the nerve, or artery, for which, I believe, there is no remedy in either case ; but these distinctions are so far of use, that they may be the means to prevent our punishing the animal to no purpose, which too often happens, from our not being acquainted with the real causes of disease.

To prove still further, that shoeing is but a partial good.—When any other kind of foot is become shelly and broken, the crust thin, or the heels low, turn the horse out to grass without shoes, rasp the foot short at the toe, keep it constantly rasped as it grows, such foot will in a short time flourish again, and become just as it was in a natural state, when he was a colt.

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And here let it be remembered, that it is much to the advantage of all colts to keep their toes short; mares also in foal will by this means carry their load much easier.—Discretion being had thereunto, as in paring the human nail, which, if cut too close, will cause a temporary forenefs.

Nevertheless no harm, except an immediate forenefs, which will soon go off, attends cutting the toe of the horse even to the quick, as shall be immediately shewn.

If you have a horse, whose foot is fleshy, whose sole is higher than the crust, take him and cut him round at the toe, till the blood follows, and stands in drops; turn him to grass bare-footed, he will in a short time
make

make a new shoot at the coronet, the weak crust will become by degrees more solid, and the thin sole more obdurate, the heels will get high and strong, and behold, where you could not before well find a place to drive a nail, the whole foot is now rendered tough and firm, will bear hammering like a piece of board, will carry as flat a shoe as any other kind of foot, and will continue so to do, if it be never pared or stopped.—Provided always, the interior parts of the foot have not been injured by disease or accident.

Hence it is manifest enough, that all horses, when turned to grass for a time, should have their shoes taken off, and their toes kept rasped round and short.

The feet of stallions are also best without shoes, whether they are kept at house or abroad ; the crust at the bottom of the foot being occasionally pared down, according to the depth, strength, and growth thereof.

Let any man keep one foot of a stallion so managed, and the other in a shoe, he will soon find a wide difference between the two feet.

Hence it will follow, that all breeders of horses, should be well versed in the difference of feet, the laws of nature seldom varying in this or other respects.

And here occurs to me the wrong judgment of the grooms in the indiscriminate custom of stopping and greasing all sorts of feet ; for greasing
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and stopping such feet, whose crust is weak, and whose sole is spongy, will render them more weak and more spongy ; such feet cannot be kept too dry.

Nevertheless, it is necessary to anoint the coronary ring of such with some cooling oil, ointment, or mucilaginous composition, to keep it pliant, and free from contraction and rigidity. —Urine will also render the crust of weak feet tough, and help to consolidate the sole.

On the other hand, the hoof being capable of contraction and expansion, strong feet cannot be kept too full of oil, for the reasons before given.

CHAP. V.

Treats of various other Lameness.

LA FOSSE has given us various accounts of fractured bones in the foot ; for my own part, I have never seen any such thing, but can easily give credit to the possibility thereof.

Yet I have seen many instances of sudden lameness brought on horses in hunting and in racing, by a false step, which have continued lame their whole life-time ; and upon examination, I have found the ligaments of the nut-bone rendered useless, for want of timely assistance and knowledge of the cause ; from hence the cartilages of the same have been sometimes ossified—and the bones of the foot have been

been sometimes wasted, and sometimes enlarged, it being no uncommon thing to meet a horse, whose feet are not fellows, the natural form of the injured foot being generally altered hereby; and nothing can contribute more to such an accident, than the unequal pressure of the foot in our modern concave shoe.

The stricture of a deep crust, and narrow form of the foot with hard riding, and much use, will also produce an ossification of the cartilages of the joint of the foot, from which a stiffness in the part always ensues.—And this may be called a spurious Anchylosis; and ossification frequently happens in different parts of the human body, from various unknown causes.—There is also another kind or degree of Anchylosis, by which is to be understood a total loss of motion in the

the joint, the first admitting some small degree of it.

In every joint there are glands, the use of which is to pour forth in action a mucus. To these are added certain vessels, that discharge a thinner fluid, which, mixed with the other, makes a liniment of a proper consistence, whose use is to lubricate the ends of the bones, all which, for the sake of motion, are covered with a cartilage or gristle.

Now when these glands are inflamed by motion, they grow occasionally rigid, pour forth more sparingly their mucus, and at length become dry and indurated.—Hence I have been led to think, this ossification of the cartilages is a secondary disorder, depending on the state or quantity of this mucous liniment.

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That inflammation attends the glands, I have seen frequent instances, where the fetlock joint of a hunted stag has been cut asunder in the summer-time, when the leaps have been strong, and the ground hard and dry; the mucus thereof having been of a very sanguine colour.

Who now shall doubt, the same may happen to the horse, especially when another weight is added to his own?—Moreover, there are instances, where the mucus of the joint in human bodies has been so diseased, either by accident, or bad habit of body, as to corrode the cartilaginous ends of the bones; and this will account for the true ankylosis in some measure; which entire coalescence of a joint can

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never

never happen, without some ulceration
in the cartilages thereof.

The glands are liable also to disease, as well as other parts—and the long disuse of a joint from a continued and casual lameness, where the glands of the same are not primarily concerned, is capable of producing the spurious ankylosis, from the thick, and inspissated state of the mucus,—which inspissation happens, from want of friction of the heads of the bones upon each other :—Hence the particles of this mucus not being divided, there will be a crispitude in the ligamentous fibres of such joint :—And this inspissation of the mucus from any other cause, will account for the reason, why the horse, who goes lame out of the stable, becomes by degrees more sound ; namely, because the heads of the bones do, by their action,

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attenuate this mucous fluid ; whereby the parts are better lubricated—and for his disorder, turning the horse out, or keeping him loose in some open building, will much contribute to his advantage.

Again ; a joint may, in great measure, be deprived of its usual motion by a redundancy of this mucous fluid ; which may be produced by bad habit of body, or because the vessels appointed to absorb, or receive the same, are not able to perform their office.

The fetlock joint is liable to frequent lameness, from blows received thereon, whereby the ligaments surrounding it become inflamed and rigid, and the integuments are thickened or indurated.

And lameness will be occasioned by strains of the muscular, or tendinous parts of the leg, continued down to the foot of the horse—from windgalls, running thrushes, splints, ring-bone, canker in the foot, straining the tendons of the leg, and what is called a letting-down, or relaxation of the sinew, from broken bones, and dislocations.

Now these which have been recited, are the only kinds of lameness, that I have ever been able to discover attending the fore part of the horse—except such as are occasioned by the crisis of a fever, or by injuries received from extraneous bodies—And I have been the more particular in setting forth the nature of some of these, that the unskilful may not be imposed on by the ignorance of farriers, nor the horse

horse punished for an incurable disorder.

In the hinder part of the horse, lameness is much less frequent than in the fore part, and less various.

A dislocation of the hip, or whirlbone, happens very seldom, and whenever it does, it proceeds from a rupture of the round ligament (occasioned by some violence) or an elongation of the same, from a disease of the part; instances of both which I have seen in a bullock and a horse, as well as of fractures of the head of the thigh bone, and of the os ilium.

Now to distinguish with certainty the reality of these, it must be observed, that when the bone is broke in either of these cases, the animal will in a few days begin to rest upon that
leg

leg a little, and gradually more and more, till the bone consolidates, and becomes united ; but when the round ligament is ruptured, or elongated to a certain degree, the head of the bone falls from the socket, the leg swings, the animal cannot rest upon it at all, and by continually bearing all the weight upon the other leg, he soon becomes lame of that also, and at last does not chuse to stand at all.—Moreover, in the case of elongation or rupture of the round ligament, the whole limb becomes longer ; and in the case of a fracture of the thigh-bone, it becomes shorter ; but in a fracture of the os ilium, this abbreviation may or may not happen, depending alone on the nature or manner of the fracture.

But the common lameness attending this joint is occasioned by the relaxed state of some of the ligaments
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belonging to it, brought on by some strain at first, and by exercise continued on such weak part.

From a sudden strain, or exercise continued on a weak part, a swelling will arise on the hock, attended by lameness.

From a sudden strain sudden swellings will arise in the cavities on each side the hock, attended with great pain.

Of spavins there are two sorts, one called the bone spavin, the other the blood spavin.

A curb is a swelling on the joint of the hinder leg below the hock— all these are generally productive of lameness.

Now

Now these different kinds of lameness befalling the hinder parts of the horse, are, I think, easily distinguished from each other, by their effects on the horse, when put into motion—for instance—if the horse, when made to go on, be lame in any of the muscular parts belonging to the foot, he will endeavour to give the foot ease, by not setting it fully on the ground—if the lameness be in the fetlock joint, or the tendons of the leg, or proceed from windgalls, or be in the hock, or proceed from any swellings surrounding the hock, or be occasioned by a curb, or spavins, or canker, all such causes will be very manifest to the eye—if the lameness be in the stifle, he cannot so well perform the extension of the limb, but will drag his toe upon the ground, more or less according to the degree of injury he

he has received, as in the manner of lameness in the shoulder; and if it be in the ligaments belonging to the joint of the hip, or whirl-bone, he will in such case rest his foot fully upon the ground, but will halt or step short in his trot with that leg, and yet perhaps be very sound in his walk; and these rules cannot vary, because the parts affected do, from their nature and use, if understood, readily point out the true cause, or seat of complaint; that is to say, the motion of the limb will be certain and determinate, according to the injury done to particular parts.

Another lameness there is, which, according to the jockies stile, proceeds from humours.

Now most of the learned world, who have wrote on this subject, have

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made themselves merry with the jockies and farriers, for using the word humours, when the horse is supposed to have a crazy constitution, or bad habit of body.

And yet herein the learned and unlearned both mean the same thing, as appears from the practice of the one, and writing of the other—The unlearned in this case administer physick, and pissing drinks, put in rowels, and turn to grafs; the learned recommend purging, and alteratives, and salt marshes.

But as all words are arbitrary, and at the will of the imposer, it seems to me of little consequence what choice we make of words, provided always, they are used to bear a determinate meaning—so that, for the sake of peace, distinction, and custom, I am
well

well content this good old phrase should stand its ground unmolested.

There is lameness then proceeding from humours; that is to say, the blood and juices in some constitutions are very viscid, and not passing so readily thro' the various canals of circulation, obstructions do arise, by which the soft parts are affected with pain, and lameness ensues sometimes in one part, sometimes in another.

Pray, why is not the word *humours* as proper here, as any other word, if not applied to any other purpose?

C H A P. VI.

*Treats of the management of these kinds
of Lameness which have been already
recited.*

NOW the farriers, when the cause of lameness in the fore part of the horse is not visible to them, do most frequently assert, that it is in the shoulder, and by chance, that it is in the foot.

When they allow this last to be the case, their method of acting is first to blister, and then to fire upon the coronary ring all round, at various intervals of space.

But blistering inflames, and firing contracts the coronary ring, which is, or should be of a pliant nature, and
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renders it more rigid ; the effects of which seem to want no annotations.

For strong and deep or narrow feet keeping at grass, or loose in a house, and short shoes, are very beneficial ; and most horses with such feet, especially on training ground, would do full as well, perhaps better, if their fore feet were never shod at all, but were kept rasped short at the toe, and their crust at the bottom was occasionally pared down.

For lameness arising from a sudden false step, which, if I rightly understand *Là Fosse*, he calls a compression, and which he accounts for by the action of the coronary-bone pushing the nut-bone against the tendon, and compressing the same as between an anvil and a hammer, he has proposed two remedies, to remove the inflammation

mation caused by it, and its bad consequences;—one is to draw the outer sole—the other is to pare it, till it becomes thin and flexible, to bleed in the foot, and to use emollient poultises and fomentations round the foot and the coronet; three fourths of these cases, he says, are cured by such methods without drawing the sole; and I beg leave to add, that I believe all might be, if they were immediately taken in hand, and the crust or hoof was also pared down as low as possible, and rendered thin on every part—because, the interior inflamed parts will be more relieved by external applications, when the thickness and stricture of the crust are removed, than when the outer sole only is pared away—but the great objection I have to drawing the sole, besides the cruelty of the operation, is, that nineteen horses in twenty (here in England I mean) have always
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been more or less lame afterwards, when used again, and that from a contraction of the hoof occasioned by such operation.

And here I beg leave to add one observation more on the folly and absurdity of our English shoers, with respect to their treatment of aw-footed horses, and which has been in part spoken of before.—Now horses with such feet being generally lame, it is a constant custom with these men, to pare away all the outer sole of such horses as much as possible, and to render their feet hollow. By this they propose to remove the pressure or binding of the outer sole upon the inner, and so to cure his lameness, which, by the bye, I never yet saw give so much as a temporary relief—but if it did, it would still be a bad custom—for the pressure or binding of one sole upon

upon the other, is in this case owing to the depth and strength, and con- texture of the crust or hoof first com- pressing the outer sole; so then by paring away the outer sole, which helps to keep the crust or hoof ex- panded and open, such crust or hoof is rendered deeper, stronger and nar- rower also, than it was before; by which addition of strength, depth, and contraction, the outer sole, as it grows again, is also more strictly em- braced and compressed than it was be- fore; hence the pressure or binding on the inner soul is increased, and that still more, every time such outer sole is pared away, till the horse at length becomes so lame, that he cannot well carry himself.

Now the proper way of treating such feet is, to pare down the crust as much as possible, without falling into the

the quick, to keep the frog high, and the outer sole full, and even with the crust, and to relax, and soften and expand the hoof by all methods.

Là Fosse directs us how to distinguish a strong compression (as he calls it) by a swelling in the coronet, and the great pain occasioned by pushing the thumb against it, two instances of which he gives us that were not cured, even when the sole was drawn—Now I very much question, but these swellings at the coronet described by him were partial dislocations of the coronary-bone; and tho' I do not mean to detract in the least from his merit and skill in the knowledge of the parts belonging to the horse, yet I am the more inclined to think him mistaken in this particular, because he lays it down as a rule, that the coronary-bone will admit of no dislocation,

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being so securely tied round by ligaments, tendons, cartilages, and the construction of the hoof—whereas, in fact, all bones, which help to compose a joint, and that are capable of motion, are capable also of dislocation — and that this coronary-bone is capable of motion, will be easily proved by the use of a muscle which is inserted into it—and the foot and pastern-bone have each of them also a muscle inserted to them.—Now the tendons of these three muscles may occasionally perhaps become united from hard labour, so as to appear one tendon; and yet in fact what is commonly called the great tendon of the fore leg has three distinct muscles, with three insertions into these three bones before-named.

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Where the cartilages are ossified, there is no cure;—for an anchylosis, there is no cure;—where the bones of the foot are enlarged or wasted, there is no cure.

To remove the inflammation of the glands, and to prevent an induration and enlargement of the ligamentous parts, and the integuments of the fetlock joint, the consequence of repeated violence, it is a good Custom for all sportsmen to cause these joints of the horse, after a day's hunting, to be well fomented with flannels dipped in warm water, or a decoction of some emollient herbs; and some warm flannel cloths should be moderately bound thereon, for the ensuing night.

For want of this, or some such method, lameness (as was before said) often happens to this joint.

To cure this, the farrier blisters and fires upon the joint, by either of which methods, applied whilst the parts are inflamed, the inflammation thereof is most certainly increased, from hence a callosity of those parts is most likely to be entailed for ever; instances enough of which we may see every day, and they are as contradictory to the disorder, as endeavouring to extinguish fire by pouring spirits of wine thereon. — For a lameness of the tendon he uses the same methods.

Now all tendons are enveloped in a sheath, whereon are situate many small glands, that are forced by the action of the tendons to pour forth their mu-

cus,

cus, which serves as oil to lubricate the same, and to keep them from growing dry and rigid, as otherwise they would do like any other cord or string.

Between this sheath and the skin of the leg, where nothing intervenes but a thin membrane, what hand can determine the boundaries of these bodies, whose Appearance, by the heat of the iron, is made undistinguishable to the eye.

Now mark the event of firing!

— If the fire reaches no further than the skin, no advantage can accrue to the tendon, but the fibres of the skin will become contracted, and less pliant; — if the fire reaches the membrane, or sheath of the tendon, some of its glands are destroyed, and the tendon becomes more or less rigid. — If the tendon

tendon be burnt, the consequence will be still worse, and in either case the velocity of motion will be impeded; no man (I believe) remembring a race-horse once fired, equal to what he was before.

In both these cases, where the skin or ligaments surrounding the fetlock joint, or a tendon is inflamed or enlarged by repeated violence, or exercise continued on a weak or inflamed part, the following method may be used.

Turn your horse loose in some open building, bleed him plentifully, and give him cooling salts, let the injured parts be fomented twice a day with the decoction of some emollient herbs boiled in water, such as white lilly roots, mallows, elder leaves, and flowers, bay leaves, or the like. The parts,
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when dry, are to be filled with some cooling ointment, and some of the fomentation is to be thickened with oatmeal, to the consistence of a poultice, and kept thereon.

When the induration and tension is gone off, a cataplasm may be applied twice a day, composed of common salt and the white of eggs, mixed with a little vinegar and oatmeal, and the parts bathed with cold vinegar (heat evaporating the subtle spirit thereof) but if these remedies do not avail, why then the use of blisters, after proper and previous evacuations, may perhaps be the means of effecting a cure, by unloading the vessels contiguous to the parts affected.—On all these occasions the horse should be turned to grass, and indulged with proper rest, that the diseased parts may recover their former fineness, tone and strength.

With

With respect to rest, the farrier has a great advantage by blistering and firing, because the leg is so inflamed hereby, that it is impossible to ride the horse for a considerable time after the operation; so that if he happens to get sound, it is generally thought to be the effect of blistering and firing; which ought, in reality, to be imputed to the rest he has had.

But when any other method has been used for this purpose, and the part looks fair to the eye, the rider mounts, his horse is lame again the first day, and the groom wisely concludes, he will never stand sound without being fired.

Now let every man, who has ever strained the tendons of his wrist or ankle, reflect on the pain he has suffered

fered from the least motion of the parts; and how long a time has been required, before he has been able to bear the extension of such tendons, even when all appearances have been fair.—Will not the case be such with the horse.

And here I cannot help censuring the jockey, who, having his horse matched, and in his exercise the tendons are so inflamed, that he cannot be allowed to gallop, yet constantly takes him out Morning and evening to give him walking exercise.

But this walking exercise can contribute little towards keeping him in wind, or making him fit for the race, yet still helps to fatigue the tendon. Whereas, if the horse was kept quiet, and proper applications applied to the injured part, it is very possible he might

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recover

recover soon enough for his purpose.—
Therefore, when it is thought improper for him to gallop, it must be much better for him to lie quite still ; and the most proper applications I know of in this case, are to bathe the parts with cold vinegar, to rub in some cooling ointment when it is dry, and to renew the cataplasm of salt twice a day ; salt externally used, being the greatest discutient I am acquainted with.

The use of ardent spirits do harm to tendinous parts when there is any tension, because, if then apply'd, they render the fibres rigid ; but when the tension is gone off, such may help to brace and strengthen the parts—a high-heel'd shoe will also be of use in this case, as it will help in some measure to keep the tendon relaxed.

Now

Now I beg leave to repeat what has been in part said already ; namely, that all lameness in the tendons of a draught, road, or running horse, happens generally from the unequal surface of our modern concave shoe, and from robbing that tendon, which is continued to the bottom of the foot, of its proper point of support, by paring the frog.—Hunters indeed may occasionally get a lameness in the tendons, from various injuries and violence received in their different kinds of work.

The method of curing windgalls, according to the present mode, is various ; but before any thing is said touching this practice, it is necessary to shew what they are.

From strains, or Blows received on the tendinous or membranous parts,

the juices of the glands are poured forth, and become enveloped in a Cyst, or Bag.

Its contents are similar to the white of an egg, and the disease is correspondent to what the surgeons call a ganglion on the human wrist.

Now some farriers let out the contents of this encysted tumour with a knife or lancet, which is always sure to be filled again when the wound is healed, after having been attended with much pain. Others blister, which for a time seems to have discharged this swelling, but when the horse comes into use it soon fills again.

Others fire upon the part, by which the outer tegument or skin is rendered rigid and indurated; hence the pain occasioned by these tumours is greater
than

than it was before, and the horse is fit for nothing but the Cart.

But the proper method is to make an incision into the skin, and take off the same with the bag, and its contents; sometimes these cysts or bags lie superficially on the coats of these three flexor tendons (which are by all writers called one, and known by the name of the great sinew) and sometimes they are buried and continued from one side of the leg to the other, through and betwixt the interstices of these tendinous bodies. In such case also the cysts must be dissected out, and entirely destroyed, or else the wound most frequently remains fistulous, or the cysts fill again, but when the cyst is not superficial, the operation is very difficult, and dangerous too, on account of the horse's struggling.

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And there are other encysted tumours incidental to the horse, whose difference consists only in their contents, and which are to be cured after the same manner as the former.

Dogs also are subject to this disorder on the knee, for the cure of which, blistering and firing are used; thus many a good fox-hound has been spoiled, that has been of more utility to the world than two farriers. —

Many of these last have I cut out with a pair of scissars, leaving the cure to be finished by virtue of the Dog's tongue.

Splints will sometimes occasion lameness, but if not, it is much better not to meddle with them at all; the use of blisters on these does little more than inflame the parts, and the use of a hot iron often rouses a sleeping lion;
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the bone of the whole leg being very often enlarged thereby; and when they do occasion lameness, you may destroy them by a caustick, which may be prepared and used in the following manner.

Take of *Spanish Flies* powdered, half an ounce, oil of *origanum*, sublimate corrosive, each one drachm; some nerve ointment, or any other, enough to make it of a proper consistence; clip off the hair, and apply some of this to the part, repeating it occasionally a little at a time for several days, till an eschar begins to separate, keeping the horse's head tied up all the while, least he gnaw it. —

When this eschar appears, the medicine is to be scraped off, and the part anointed with some cooling oil; after which nothing more remains to be done, but to turn the horse to grass, and keep the

the part daily touched with train oil.—

By these means, various eschars will scale off one after another, till the part becomes smooth and well.

But from the effect (which Mr. *Minors*, an eminent surgeon in *Chancery Lane*, told me) spirit of salt had on venereal nodes, I have been induced to try the virtue of it on splints and spavins, and other nodes, which, when applied with caution and prudence, is a wonderful remedy in these cases; but I can by no means lay down any certain or determinate method of using it — being of such a corrosive and active quality, that it will totally destroy the ligaments of the joints, if improperly used, or even consume the bone of a horse's leg in any part.

For a letting-down, or relaxation of the sinew, Mr. *Ingram*, an eminent
fur-

surgeon in *Fenchurch-Street*, has already obliged the world with a remedy, which, he says, has been often used with success; this is to make a whey with some allum. boiled in milk, to foment the part with the whey, and to bind the curds thereon by way of cataplasm; and after a few days, colcothar of vitriol finely powdered and mixed with white of eggs, is to be applied as a charge every twenty-four hours, and a smooth bandage kept on the part.—Now oil in this, or any like case must do harm, because it relaxes the fibres of the tendon, which are already too much relaxed.

When the muscles and ligaments of the shoulder are strained, keep the horse tied up and free from motion as much as you can;—warmth, discutient fomentations, or the frequent use of vinegar, will restore him to a sound state;

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but

but the muscular parts generally recover much sooner than the ligamentous or tendinous.

Extension and counter-extension are proper methods of reducing all joints—Vinegar and the salt cataplasm is to be used after the reduction of the bone, a bandage should be applied round the joint, and proper rest must be allowed.—Oil or ointment is to be avoided here, because the fibres in these cases want to be braced, and not to be relaxed, as was before observed.

But if there be a great distention or inflammation of the parts, such should be relaxed with oil, before the reduction of the bone is attempted.

In the case of a dislocation of the hip or whirlbone, where the head of the bone is fallen down from its socket,
either

either by rupture, or elongation of the round ligament, I believe it is in vain to think of any remedy. — But where the ligaments surrounding the joint are supposed to be relaxed, blistering and firing (which are always coupled together like two hounds) are the methods generally followed.

Now blistering, if it be ever proper, is in this case likely to be of use, by inflaming the parts, and giving a new and increased heat to the flaccid and relaxed fibres, which may be occasionally repeated. Warm strengthening charges should be applied afterwards, and proper rest given; — but all that firing can effect, on this, or any other occasion, is, that by contracting the fibres of the skin, the relaxed fibres of some other adjacent part may become more strictly embraced; which cannot happen in the present case, because

there are strong muscles intervening between the skin and the ligaments ; and I think that firing seldom is of any use in any kind of lameness whatsoever.

For the same reason, when a lameness happens in the stifle, I have found blistering the most immediate and effectual remedy. — On this occasion, a broad piece of cloth should be kept on the adjacent part of the flank of the horse, to prevent the inflammation, which would be otherwise produced by such blistering.

By repeated blistering, a curb is easily cured, if taken in time.

If the joint of the hock is much enlarged, whatever be the cause, there is generally a redundancy of the mucus, and the ligamentous parts and cartilages will in all probability be affected.

ed.—Here again the custom is to blister and fire : — but here also, if the parts are inflamed, as they are most likely to be, blistering must be wrong — vinegar, or warm fomentations, with spirit of sal armoniac, are to be used, and the cataplasm of salt should be used twice a day. — In this, or any other inflammatory cases, cooling medicines should be given inwardly, and frequent bleeding is necessary. — But when these methods prove unsuccessful, blisters may then be tried, tho' I have never seen one instance of their doing good in this case, amongst a number of repeated trials.

But this disorder is often incurable, because the ends of the bones are in this case often enlarged.

When sudden swellings arise in the cavities on each side of the hock, repeated

peated bleeding is necessary; the part is to be bathed frequently with cold vinegar, the salt cataplasm is to be used, and such a bandage with bolsters on each side applied, as will most effectually compress these swellings; so will they disappear, and the horse become sound.

For a lameness proceeding from what is called humours, after bleeding and proper purgation, the cure is to be attempted by such medicines, as will most effectually produce an alteration in the blood and juices; amongst which kind of medicines I have found salt petre to be very efficacious, when given daily, and continued for a time; which may be done without any interruption of exercise, if there be no other cause to prevent the same.

For

For a canker in the foot; — blue vitriol powdered, and bole armoniac; or vinegar added to the same, will generally be found a remedy. — If the case be obstinate, a few drops of aqua fortis may be mixed therewith.

Running thrushes will be cured with lint dipped in strong blue vitriol-water thrust lightly into the part; but this discharge, once diverted from its usual channel, some more noble part may perhaps be affected, or blindness ensue. — Wherefore, when this is attempted, the horse should be immediately purged two or three times, and go through a long course of the salt petre, or some other cooling salts.

The blood spavin is a preternatural expansion of the vessel passing over the hock; now the general method of
treat-

treating this disorder, is to make a ligature round the vein, above and below the swelling, to prevent future circulation; after which, blistering is usually applied to the swelling. — But I think it a more certain cure, to make an incision thro' the skin, upon the swelled part, then to pass a ligature round the inferior part of the tumified vessel, and to dissect the superior part of it quite out; after which it is to be dressed according to the methods that will be directed for wounds in general.

As to ring-bones and bone-spavins, I never yet saw any method of cure, that may be relied on as effectual.

Now the usual method of curing these disorders, is by the application of some medicine of a caustick quality, which being, of necessity continued

nued for a time to produce an eschar, destroys the hair, and always leaves behind it a certain blemish.

But the most proper method is as follows ;

First, Clip the hair from the diseased part—make several punctures on the same thro' the skin with a sharp pointed instrument — make a longitudinal incision thro' the skin above the diseased part, about the middle thereof—there introduce a cornet, and dilate the skin with it, as far as the swelling reaches. — Make another smaller longitudinal incision thro' the skin below the swelled part, directly opposite to the wound above, in doing which, your probe introduced at top will direct you. — At the superior wound a caustick wrapped up in a piece of lint is to be introduced, and there left.—

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The

The caustic dissolved, is carried off by the inferior wound — the whole is directly to be covered with a warm ad-hæfive charge—and this is the whole of the operation.—The caustick thus introduced under the skin acts both ways, namely, on the membrane underneath it, and the outer tegument upon it — thus the membrane, outer tegument, and the charge, throw themselves off together, and the diseased or swelled part becomes fair and smooth, without any blemish or loss of hair. — The horse should be turned out, or kept in a loose stable, and if the charge comes off before the wound is well, another should be immediately applied. But in spite of this, and all other methods used for these disorders, the horse will very frequently remain full as lame as he was before, although the appearance of the disease is removed — the reason of which is, that the periosteum only

only is sometimes diseased, at other times the bone itself, and its cellular part. Yet I dare say, there is not one farrier in this kingdom, but has an infallible and certain cure for these disorders.

P A R T II.

C H A P. I.

Treats of Wounds in general.

WITH respect to the treatment of wounds of the feet by puncture, the Sieur Là Fosse has laid down some rules, which appear to be very accurate, and anatomically true; for which reason I shall only observe, and would have it laid down as a general rule, that whatever wound may happen to the coronary ring, or the cellular spongy part of the heel,

whether by puncture, tread, incision, laceration, or other accident, no medicine of an unctious nature (except in the case of a sandcrack) is to be applied to the part, such applications always producing fungous or spongy flesh, which occasions much pain and inconvenience to the horse, as well as some trouble to get rid of.

With respect to the treatment of wounds in general, there seems but little skill required, especially where the habit of body is good, the orifice of the wound depending, and there is room sufficient for the matter to be discharged; and here may be laid down the proper method of treating wounds in general.

If an arterial blood-vessel be wounded, the bleeding will be stopped, by making

making a ligature with a needle and thread round the end of the same.

If the hæmorrhage or bleeding be small, lint dipped in flour, blue vitriol water, or even oil of vitriol (if occasion be) will generally have the desired effect—over this a digestive spread on tow is to be applied, and the whole covered with a poultice of bread and milk.

After two days this dressing should come off; the part is to be fomented daily with some warm fomentation, the digestive also and the poultice is to be continued, till the matter appears to be well digested, and the flesh of the wound begins to look of a red and florid colour—the digestive may be prepared in the manner following.

Take

Take of linimentum arcae one ounce, oil of turpentine two drams, melt together.

Warm fomentations are thus made.

Take of sage, lavender, rosemary, wormwood, centaury, chamomile flowers, or any of these, boil in water, and strain the liquor for use.

When the flesh about the wound begins to look red, nothing more is required than gradually to heal the same; the fomentation and digestive are to be laid aside, and instead thereof, lint dipped in water, strongly impregnated with blue vitriol, to keep down the fungous flesh, is to be applied, and covered with a medicine, called unguentum desiccativum rubrum, or *Turner's Cerate*.

If

If the blue lint should not be sufficient to keep down the spongy flesh, some drops of aqua fortis may be added thereto, or the same may be sprinkled with red precipitate, and covered with a pledget of the above ointment or cerate; or, instead of this method, take of blue vitriol powder one part, of bole armeniac four parts; this is to be strewed lightly on the wound, and the same covered with a poultice; the quantity of the vitriol powder may be occasionally increased, its use being to keep down the growing spongy flesh.

Now the use of some such medicine or poultice, continued even till the wound is healed, is much neater, and more eligible than the common method, and perhaps a better cure; for by means of these some discharge of matter is still promoted, even till the wound

wound be well—whereas, according to the common method of healing wounds, some wash, or powder of an escharotick quality is generally applied to the part ; hence the wound is immediately dried up, with an eschar thereon, which scales off by degrees, but by such immediate drying up, an indurated swelling often remains on the part, more especially if it be situated near a joint.

When wounds happen to the tendon of a horse, great pain and inflammation, perhaps a fever ensues.

I once saw an instance, where a flexor tendon of a horse was wounded by the point of a sharp flint (as it was supposed) in hunting.

A farrier was sent for, who, not discovering this small punctured wound, declared the horse to be lame in the
 shoulder

shoulder (as they generally do upon all occasions) — and to cure this shoulder lameness, he put a patten shoe on the foot of the sound leg, that the horse might be obliged to stand upon the lame one; which gave him so much pain by stretching the wounded fibres, that he did not chuse to stand at all.

After some days, I was desired by an acquaintance to look at the horse; upon examination I found the true cause; the part was dressed with a medicine of an agglutinating quality, namely, lint dipped in equal parts of the balsam and oil of turpentine; this was covered with the digestive, and a poultice applied over the whole; with some difficulty I persuaded the doctor to take the patten shoe from the foot of the sound leg, and to put it on that of the lame one; by these means the horse became well, and sound as

P

ever;

ever ; — for the extreme ends of divided tendons, if brought into contact, will in a reasonable time unite again as well as divided bones.

And here it is to be observed, that all tenting of wounds is a pernicious practice, by the use of which matter is confined, tendons, ligaments, and cartilages are injured, and bones are rendered carious or rotten ; besides other inconveniences of pain, inflammation, and fever consequential thereto.

In all wounds, where the matter lies lower than the orifice of the wound, and cannot flow out, it produces fistulous cavities in the parts—Now it is always necessary to go to the bottom of such (where the parts will admit of incision) (otherwise no cure can be expected).

This

This is the case with respect to what is called pole-evil in the neck, and fistula on the wither, both which would be easily cured if cut to the bottom, observing carefully to distinguish between these cavities, and the interstices or division of the muscles, and not to wound the cervical ligament.

The proper method of treating these evils, after the necessary incisions are made, and the bleeding is stopped, is to fill the parts with dry lint, and the wound to be treated in every respect according to the general rules before laid down.

Now the farriers in this case, after making the incisions, always begin at the wrong end ; that is to say, they make use of escharotic applications at the very first dressing ; hence a suffi-

cient quantity of granulated flesh not being suffered to increase, the parts when well, become indented, with an unequal surface, and much loss of substance.

In all deep wounds of the muscular parts, caused by puncture, stabbing, or staking, the orifice of the wound should be made wider as soon as can be; for such wounds do not discharge a laudable pus or matter, by means of which, the inflammation attending them would be carried off, but a bloody ichor flows therefrom, and the wound is ever ready to become closed again, if the orifice thereof be the most narrow.

When horses are staked in any part, the common custom is to thrust a candle up the wound, as far as can be, and to keep it confined therein, by which

which means numbers are killed; and if any happen to live, it is entirely owing to the constitution of the horse, the wideness of the orifice of the wound, and its depending state; for if the matter in this case be confined, or not well digested, inflammation, tension, gangrene, fever, and death, will certainly ensue.

Now the proper method of acting in this case, is to make a crucial incision in the orifice of the wound in this manner +, sufficiently wide for the matter to be discharged, according to the nature of the parts, and the situation of the wound.

The lips of this incised wound are to be filled with lint, thrust gently between them, to prevent their uniting again; and if any considerable effusion of blood attend this incision, it will

will be stopped by such methods as have been before directed for this purpose, and by various others — this is to be covered with the digestive before-named, and a poultice applied over the whole — this dressing is to remain on the part two days, after which such methods are to be used as directed for wounds in general.

When shallow punctures happen on the joints or limbs from thorns, stubs, or other sharp bodies, if such reach the ligamentous or tendinous parts, the small discharge flowing therefrom, once stopped by a medicine of a repelling or discutient quality, will generally produce great inflammation, with other bad symptoms, and much matter may be formed—and yet I have known several instances of such punctures, both in the equine and human species, cured by fomentation, and the use of salt—

But

But in all such kinds of punctures, emollient fomentations, with a poultice made of bread and milk, or oatmeal and strong beer grounds, kept on the part, are the proper methods of cure.

In lacerated wounds of the skin or muscles, a needle and thread may be used to unite the divided parts (according to the depth and nature of the wound) leaving proper intervals of space between each stitch for the matter to flow out; but if great inflammation ensue, and much matter be produced, and lodged in the part, it is necessary to cut away the stitches, and the inflammation will cease; but wounds of the skin will generally be cured by the application of lint dipped in Friars' balsam.

Incised wounds will also be cured (in general) by the same means.

In

In gun-shot wounds, the method, before directed will take place, all foreign bodies being first extracted, if it can be done.

If any induration remain on any part when the inflammation is gone off, whether it be the effect of drying up a wound too fast, or the consequence of a puncture by a thorn, or other accident, the parts should be well embrocated with some cooling ointment, with the use of emollient poultices and fomentations.

CHAP.

C H A P. II.

*Treats of various other incidents to which
the horse is liable to.*

IT frequently happens, for want of proper care in bleeding at the neck, or afterwards, that a swelling falls on the part, attended with many bad symptoms; sometimes with the loss of the vein, sometimes with gangrene, and subsequent death.

Now this is generally a long time in hand, yet may as generally be cured in a few days, by the following means.

As soon as you perceive this evil, the use of warm fomentations, cooling ointment, and a poultice of bread and milk, will very probably remove the same.

Q

But

But if these methods do not succeed, a rowel is to be put into the skin, in the middle of the horse's bosom, and with a tobacco-pipe, or any other tube, blow up the skin quite to the part affected; so will an immediate derivation be made therefrom as soon as the rowel runs.

If any swelling or induration still remains on the neck, it will now be removed by poultice and fomentations, or the following mixture.

Take of spirit of wine four ounces, camphor and bole powdered, each one dram, aqua fortis twenty drops, dip some lint or tow in some of this, apply to the part, and bind over it some warm thick cloaths, without which, this application does no good on any occasion.

When

When swellings happen on any part of the back or wither, from bruises of the saddle, this last medicine is of more efficacy than any other I am acquainted with—for it will in a few days dissipate such swelling entirely, or bring it to matter; and what is particular, when matter is produced, the swelling itself is of much less magnitude than it would be, by any other application productive of matter.

This may be used twice a day, rubbing some of it upon the swelling, and wetting some lint or tow therewith, to be bound on the part.

But if matter be formed in this case, as soon as you perceive it to fluctuate under the finger, it is to be let out with a knife—some lint dipped in this mixture, and applied to the part once or

twice a day, will cure the same, without any digestive or other means. It will also cure a rawness on the back, or other part, if the fungous flesh be not grown too high.

Encysted tumours will also happen from bruises by the saddle on various parts of the back.—Which are to be cured like other encysted tumours, by taking out the bag and its contents.

If in taking out an encysted tumour the bag should be wounded, and its contents let out, which may happen to any artist, care should be taken to destroy the bag as much as may be with the knife—which is to be dressed with the digestive and poultice; and when the wound appears red and florid, according to the general method before directed.

When

When a canker happens to the tongue of the horse, take of oil of turpentine and oil of vitriol equal quantities ; touch the sore part with a rag tied on a stick, and dipped herein ; it will cure the same, repeated at proper intervals.

P A R T III.

C H A P. I.

Treats of Diseases.

WITH respect to the various diseases of horses, I think there are some not rightly understood, as well as various kinds of lameness—and from the attention I have paid thereto, and the subsequent events, I believe I shall be able to shew, that all the learned authors, who have
wrote

wrote on this subject, have been as much mistaken in the nature and cure of some of these, as the farriers— Which authors have also made many useless distinctions of diseases, that tend only to perplex the reader, by multiplying the number, some of which do not exist at all, at least not in such a manner, as they are set forth.

In the year 1750, I think it was, that the distemper amongst the horses (as it is called) was more universal than at any other time.

Various were the symptoms, and different the degrees of illness amongst different horses. Some had a discharge of matter from their eyes, nose, and mouth, others had none; but in all there were great tokens of inflammation, attended with a fever, and a violent cough.

I had

I had at that time in *London* a favourite horse, that was seized, amongst a number of others at a livery stable, with this distemper; he had no discharge of any kind, but had a dry cough, and a violent fever, was very dejected, would touch nothing, and was more likely, as I thought, to die, than to live.

I was very anxious about the welfare of my horse, and having never seen any thing like this kind of illness before, I advised with such people, as I thought had most right to understand the nature of it—from whom I received no satisfaction, all being at a loss in what manner to act.

So most of those horses which had a plentiful discharge of matter from the nose, &c. lived, and where such discharge
did

did not happen, nor a critical abscess fall on some part, most of them in *London* died. — My horse continued in the same situation two or three days; and I was still over-persuaded not to meddle with him, but to wait in expectation of what nature might do, by promoting some discharge, which yet did not happen. — In this dilemma I visited several horses just dead with this distemper, who had no discharge from the nose, &c. in hopes of discovering the cause of their death, and finding a remedy. — On many of these I made several incisions in the skin, on various parts of the body; and wherever an incision was made, I found in all of them a quantity of extravasated serum, lodged between the skin and the membranes.

I was no longer in doubt what was to be done, but immediately ordered him

him to be bled, and several rowels were put into the horse, to the number of six or eight — which the bystanders said would soon mortify, and the poor horse was condemned to die.

But, behold, in about thirty hours he held up his head, began to look chearful, and to eat his meat; and, in another day, became as apparently well, as ever he was in his life.

And yet, after all this discharge, when the rowels were taken out, and he had been twice purged, an ædematous swelling soon after fell into one leg and thigh, which, I apprehend, might arise from the vitiated state of the blood and juices, or from too brisk an operation of the physick in such a depraved habit of body.

R

Now,

Now, to the best of my remembrance, there is no knowledge falls to any man's share in any science, physical or other, but what is acquired by experience and reflection.

Upon reflection then of the success of these rowels on my own horse, I began to think, that the use of them, even on horses that had a discharge at the nose, might be very conducive and assistant to the cure, where nature, as I thought, plainly indicated the way, in endeavouring to throw off the disease by such discharge—and by nature alone, as I have been told, the physician should always be guided. — And on trying the effects of rowels upon horses who had a discharge at the nose, I found my expectations answered, and they got over it much sooner than those which had no such assistance.

From

From the good discovered of promoting secretions of one kind, I considered it might be still better, if other secretions could be promoted also at the same time, which would help to cool the inflamed blood, as well as to unload the vessels, and consequently to abate the fever; and for this purpose cooling salts are a proper medicine.

So when the horse is seized with this distemper, he should be treated according to the different symptoms that attend him.

If he has a violent fever, with a dry cough, and there be no concomitant discharge or running at the nose, he should be bled largely.

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If

If a discharge at the nose appears, bleeding will be found to do harm, being contrary to the attempt of nature in such discharge; but in both these circumstances, he should take cooling salts every six hours, three or four rowels should be put in various parts, where the skin is loose, the excrement should be often raked from him; if he be costive, cooling and laxative clysters should be given.

Now some of the writers on the subject of horses have given mighty cautions against the use of rowels in feverish disorders, and talk of the danger of mortifications attending them, when in reality there needs no such fear. But allowing it to happen by chance, it could not be deemed a sufficient reason against the universality of the practice, any more than it would
be

be against the use of blisters on the human body ; because some men in a fever by chance have died with a mortification on the blistered part.

But if any such symptom as a gangrene should appear, on this or any other occasion, warm fomentations, with some spirits of wine added at the time of using it, and a poultice made with oatmeal, cummin seed, and the grounds of strong beer, to be kept on the part, are the proper remedies.

Since the Year 1750, this disease has visited by turns each stud and stable, has fallen on horses of all ages, at various seasons of the year, and in different shapes ; wherever it comes I believe none escape ; and when it falls on sucking foals, they are generally stunted and spoiled.

I hap-

I happened last summer to be at the house of an acquaintance, who had a large stud of mares and colts, of various ages, ill with this distemper.

They were attacked in various forms, some had a discharge from the eyes, nose and mouth, some had critical swellings fell on the udder, some on the shoulder, others on the side of the jaws, under the jaw, and on other parts.

As they fell ill they were taken to house ; and I staid at this place several weeks, to try what methods of treatment might be of most service to the animal ; and to make such observations thereon, as might contribute to future use.

They were bled, or rowelled according to their different age and symptoms,

toms, and salt petre was given them, by which means they all became soon well, except the sucking foals.

When critical swellings appeared, I made a large incision on the part, and let out large quantities of matter.

The surgeons generally esteem a critical abscess in such case to be a certain cure; and tho' I am very certain, that I did not open one swelling, till it was fit for the operation, and which contained at the time laudable matter, yet so much is the blood sometimes vitiated with this disorder, that after the wound was well, many of them had other critical swellings fell on other parts, again and again, which when ripe were all opened, and by which means at length they also became well.

Others

Others (as soon as ever the swelling appeared on any part) were bled, had several setons put in the skin, some on the depending part of the swelling, and the salt petre was given, thinking by these evacuations to divert the febrile matter, and effect a cure. — But after a trial of many days, I found this method of no use, the swelling all this time neither advancing nor receding.

Upon which the setons were taken out, the salt petre left off, and in a few days the swelling came to good matter, by the discharge of which the horse got well in due course of time.

But for the sucking foals no remedy availed, the disease baffling all attempts of art and nature.

If

If you bled them, a swelling perhaps came on the part, and would remain indurated for several months, which was neither to be dissipated, nor brought to matter; the same kind of indurations would also fall on other parts.

If matter was formed, and let out, fresh swellings succeeded each other, or some other symptoms of the disease remained for several months, even till they were weaned—The cause of which I think is very evident.

Now the mare that gives suck is never, at least that I could perceive, affected with this disease, which, in all probability, proceeds from the constant secretion of her milk, by means of which her vessels are still kept emptied, and herself free from any symptoms of a fever,

ver, and yet her blood may be much vitiated and corrupted.

I have seen several foals at the mare's foot, whose blood has been so poor, as to occasion their legs to swell, even when they have been running about in the field ; which same foals, if continued to have sucked much longer, must inevitably have died — And yet when taken from the mare and weaned, have been soon recovered by the same means, that before were found ineffectual. — From which instances I am ready to conclude, this long continued illness of the foal, is entirely owing to the depravity of the mare's milk.

Now if we are lucky enough to discover the cause, it is twenty to one but we find a remedy.

And

And in order to this, it will be necessary to think of altering the blood and juices of the mare, — to answer which design, she should be bled two or three times, and take some cooling salts every day, and the same given to the foal once a day, or oftner (if occasion be) with the use of setons, will be the means of curing him also; the milk of the mare should be drawn from her, unless you propose to wean the foal — if not, such foal is to be supported with cows milk, mixed with flour, till his health is reinstated, by which time the habit of body in the mare will be amended also.

When a critical swelling appears on any part, all means used to divert it are wrong, and ineffectual, but a poultice of bread and milk should be applied to the part to forward the mat-

ter, which when ripe, and not before, is to be let out by a proper incision, and to prevent any future swellings on the same, or other parts, some discharge should be continued for a time by an artificial drain, with the daily use of some cooling salts to correct the vitiated blood.

— And I have of late followed a method somewhat different from rowels or setons, tho' analogous thereto, which I think much better than either of them, because it sooner brings on a discharge, and that in more abundance, is attended with less inflammation, and may be continued as long as you please, — and this is, to make a number of incisions into the skin on any part where it is loose, to dilate or separate the same with your finger all round as far as it will reach, and moderately to fill such part every day with lint or tow
dipt

dipt in the digestive directed for wounds,
first taking out the former dressing.

By these methods all the symptoms
attending this disease in every age will
be removed, and its destructive con-
sequences prevented.

Now amongst critical swellings, I
think the strangles may justly be reck-
oned, the situation of which disorder
is under the jaw, whence I suppose it
may derive its name.

In all these cases horses should be
kept warm, and by no means go out
of the stable whilst matter is forming ;
— this also is to be treated after the
general method laid down for other
abscesses or critical swellings. And
here too the use of incisions in the
skin as drains, and cooling salts will
be very proper after the swelling or
wound

wound is become well, — for this also is the crisis of a fever, tho' it happens to all colts sooner or later, and falls on the same part.

And here I cannot help relating an instance of the most gross ignorance, which I once saw committed by a farrier of mighty fame. — A horse had been ill with the distemper, and nature had been kind enough to form a critical swelling on the back, in which there was matter ripe and fit to let out — The Doctor came, but instead of letting it out, he made use of a discutient fomentation, by means of which, if the matter could have been repelled, and again taken into the circulation, the animal must have died a most wretched death.

And here is a proper time to shew, that the learned authors, who have
wrote

wrote on this subject, have been much mistaken with respect to the nature of some diseases.

For instance, the mad-staggers is treated by all writers as an apoplectic or nervous disorder — which nervous disorder is a something they know not what ; and is a kind of subterfuge for what they do not know.

But the mad-staggers is in reality a fever, of which I have cured many horses by the same means, as those directed for the fever, called the distemper.—And all the different diseases called by the name of convulsions, epilepsy, vertigo, and apoplexy, are nineteen times in twenty secondary effects, or symptoms of a fever.—Just so it is amongst men, some of whom have with a fever the concomitant symptoms of coma, or sleepiness, delirium or madness, spasms,

spasms, convulsions, &c. yet these are always treated as real diseases in horses by our farriers, who, to give the strongest proofs they can of their ignorance in these matters have lately found out a new way, by which they expect to cure these disorders, and that is, by giving the horse a drench through the nose instead of the mouth.—If horses were to doctor men, could they act with less rationality ?

But some of these symptoms called by the names of vertigo, apoplexy and epilepsy, may happen to the horse from repletion, when there is no apparent fever, and from various other causes ; for instance, the worms in horses, as well as in men, will occasionally produce the appearance of all diseases—Now these concomitant symptoms of delirium, coma, convulsions, &c. do not require our particular attention

teation in horses as in men; but when the fever is attended with such symptoms, large and repeated bleeding is your chief dependance, more especially if the jaws are shut so fast, as to render it impossible to give the horse any internal medicine—incisions of the skin as drains, and clysters should be used, and nitre given internally, as soon as you can open the horse's mouth, taking care to join some laxative salts with it, to keep the horse's body open, or rather looser.

Now I'll tell you a story.

A horse mad with the staggers broke out of a stable belonging to a powder-mill, and got to a large cistern of water, in which so much salt petre was dissolved, that it was barely in a state of fluidity—He drank, or rather swallowed several gallons; this soon pro-

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moted

noted a very copious secretion by the urinary passages, after which he became immediately well, without any other assistance.

I mention this to shew, the good effects of nitre in fevers, and that some horses are able to take any quantity of this salt; and yet others, from a difference of constitution, more particularly when they eat grass, shall not be able to take the smallest quantity, without being affected with gripes or cholick, therefore it is always best to begin with a small quantity, not less than an ounce, which should be mixed, and made into a ball with some mucilage of gum Arabic; and if the horse be not affected with cholicky pains, the dose may by degrees be increased to a greater quantity, according to the different age and symptoms — But when gripes ensue from the use of this salt

given

given in small quantities, you will find, that tartar solubile, sal regeneration, or any such kind of neutral salt, will answer your purpose given twice or thrice a day in such quantities, as you would use nitre.

When the horse is thrown into a fever by hard riding (which the farriers call melting the grease, and writers also) he will be cured by these methods.

Now this melting the grease is nothing more or less than the ferous particles of the blood, extravasated by too much heat and labour, which may be found betwixt the skin and the membranes, when the horse dies of this, and of some other inflammatory fevers.

By the same means the pampered stallion is saved, who has revelled in love and plenty all the summer.

These are happily joined together. But when the heat of autumn comes, and the seminal discharges are over, he is still fed as high as ever, from which full habit of body fevers often arise in various Shapes, and death ensues.

Now what can be expected from such who live in a constant series of indolence and luxury, but a dull, diseased, phlegmatick race? wherefore, when the covering season is over, he should have more exercise, and less food; and when the spring comes on, he may be allowed to live more plentifully, by which he will acquire fresh spirits, and new vigour to perform the feats of love.

And thus every kind of fever in horses will be most frequently cured, if taken in hand before the juices are
fallen

fallen into a state of putrefaction, remembering still that horses are mortal, as well as men; but these methods are founded on reason, and the observation of nature's laws, and confirmed by experience, which is all that physical knowledge ever yet pretended to.

The use of cooling salts, with proper bleeding and clysters, will generally be sufficient to remove most common fevers; yet if the case appear urgent and dangerous, then, by way of security, incisions of the skin as drains should be used also. — For want of such secretions and evacuations, the horse, tho' he may happen to recover of his fever, is liable to, and often is ruined by consequential disorders, such as the farcy, broken windedness, tubercles of the lungs, consumption, glanders, and ædematous local swellings, that are never removed.

To

To this the learned may perhaps object, that so many different evacuations and secretions, promoted by bleeding, drains, and nitre, used all together, impede the operation of each other—With all my heart, I don't know but they may — yet these united help to abate the inflammation, attenuate the fluids, and discharge the same, better than either of them used alone — And my design is, not to trouble the reader with any speculative matters, but to tell him a plain story, which he may easily understand; and to shew him some rules, whereby he may save forty-nine horses out of fifty in every kind of fever, without applying to any farrier, who most times is in these disorders a greater enemy to the horse than the disease itself.

There

There are two diseases indiscriminately called by the name of the yellows, which being different in their nature, seem to require some distinction, and the more so, because they will require to be treated in a manner somewhat different.

One is an inflammatory fever, attended with such symptoms, as appertain in general, to that which is commonly called the distemper in horses, with a discharge of a yellow serous matter from the eyes and nose, &c. and is generally produced by heat, and close stabling.

In this case bleeding is improper, because the efforts of nature are thereby impeded, but drains, salts and clysters will take place as in other inflammatory fevers.

The

The other where the finer vessels, and the cuticle of the eye are tinged with a yellow hue, and not attended with a discharge from the nose, &c. is the effect of obstructed bile—Here bleeding (tho' always used) must be very improper, when there are no tokens of inflammation, and rowels in this case can do no good, but nitre and antimony, and Castile soap, with a decoction of madder root, given twice a day, are the proper remedies.

By the daily use of salt petre alone, continued as an alterative after the distemper, I have rode my horse a fox-hunting in half the time that I could have done, if he had gone through a course of physick, and he has performed as well in every respect.

If
The

If such are the effects of cooling Medicines in fevers, what is to be expected from a contrary treatment, or the inconsistent medley of cordials, nostrums, and specificks, given by grooms and farriers, without knowing the least tittle of anatomy, or the animal œconomy, without so much as knowing wherein the disorder consists, or even the nature of the medicine they use as a remedy—But, however, not to detract from the merit of these men, it must be granted, that what they want in knowledge is amply supplied by the goodness of their receipts. And it would be a very hard case indeed, if in a receipt, consisting of a great number and variety of articles, one of them should not * happen (as they say) to lay hold of the disease.

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Now

Now nine and twenty different ingredients will most certainly make a very good receipt, but if it exceeds thirty, no malady of any sort can stand before it.

Will their knowledge of a proper treatment, of tumours, wounds, and various lameness, without being acquainted with the nature and use of the component parts, be more extensive than it is in the proper treatment of diseases? — But time and rest, and wonder-working nature, and the simplicity of the horse's food, oftentimes effect a cure in spite of all their absurd applications, which they from vanity and ignorance conclude to be the effect of their own skill.

I'll tell you another story.

A man

A man was inoculated for the small pox, in the interval of time, between that and the eruption; he was seized with the gout in both feet. — He was ordered to apply flannels to the same, and when the pock came out, he had none but upon his feet, which were very full.

I mention this to shew, what evils may be produced by heat; and for the learned to consider, what future good may in such cases be derived from local acquired heat.

And here occurs to me the wrong judgment of the jockey, in stopping every avenue, even to the key-hole of the stable door, whereby the pure nitrous air is excluded from the faintly respiring horse. — Hence the serous particles of the blood are discharged —

Hence fevers appear in different shapes, and variety of illness is produced from not distinguishing between the effects of heat and warmth.

And here may be justly said (what was said before about the lameness of horses) that nineteen times in twenty the diseases befalling all horses, are occasioned by too much heat, and too confined air.

Now, to the best of my observation, what is called the distemper amongst the horned cattle, is exactly correspondent to the distemper amongst the horses, the symptoms in each animal being similar in all respects. —

And the discharge from the nostrils, &c. of the cow in these fevers, about the nature of which, and of this distemper, there has been abundance of fine writing, is nothing else, but an extra-

extravasation of the serous particles of the blood, the effect of inflammation — and therefore, in obedience to the attempts of nature, our business is to invent all the methods we can to carry off this extravasated serum, — and the incisions, as before directed for the horse, made in the skin of the cow, will, as it does in horses with the same sort of fever, produce in twenty-four hours a nasty foetid purulent matter. — By a number of these drains the parts will be unloaded, and the animal relieved, — and they do in every kind of fever amongst horses, and I dare say will too amongst the cows, answer nearly the same end, and purpose, as a critical abscess. But when no critical abscess happens, or no artificial drains are made use of, the natural one's, not being sufficient to carry off the extravasated serum, the viscera, and more noble parts, are in time affected, the blood and juices deviate

deviate by degrees into a state of putrefaction and corruption, and the animal dies a most wretched death.

If any man object and say, this distemper of the cows is infectious, and therefore it is of the putrid, and not of the inflammatory kind:—I answer, that it does not appear to be infectious, because some cows amongst a number of infected ones have escaped it—and that these animals are not subject to putrid fevers, as men are, from the difference of their food.—But allowing it to be of the putrid or pestilential kind, and to arise from air, infection, or both, these artificial drains made in the skin will still be very proper, because they will answer in some measure the same end, as the bubo or critical imposthume befalling the human species in pestilential disorders.—If they are properly managed.—And here it
may

may be observed, that when distempered cows have escaped death, it has been generally owing to some critical abscess, various instances of which I have seen.

To these artificial drains should be added the use of cooling salts, and laxative clysters, if needful.

It is necessary to observe, that bleeding the horse or cow will be wrong, and must do harm, when a discharge from the nostrils, &c. is begun, because it is contrary to the effort of nature; and so it is when there is any swelling that is tending to matter, which kinds of swelling can be distinguished by the skilful only.

From the observations I have made on the diseases of these animals, and from the sameness and simplicity of their

their food, I think there is great reason to believe, that the same remedies will have the same effect in one species as in the other — and it is much to be wished, that the legislative power will give the farmers leave (whenever this distemper shall again appear) to make trial thereof, and oblige them to deliver in, at some proper place, the symptoms of this disease, and the effect of these proposed remedies.

Now the author's sole motive in publishing this is the good of the community:—but if these methods should prove successful, particular men will be also benefited—For the College of Physicians will be prevented the trouble of any future meetings on this occasion; and the good bishops will avoid the fatigue of composing pious forms of prayer to deprecate this evil—as if the Almighty Being (like an earthly prince)

prince) was to be influenced by human entreaties to alter his general laws, whereby all things are governed—not considering, that natural evil must unavoidably happen to the creatures of this earthly state, from the contingencies of food and climate.

There is another disorder incident to bullocks, which the graziers call being hove or sprung; that is to say, the animal, from overcharging the stomach, is swelled in such a manner, as to bring on speedy death, unless soon relieved, all digestion being at a stand.—This will be cured by raking the excrement from the strait gut, and by salt petre, or any laxative salt given plentifully—or by sea-water, — and bleeding, will so far do good, as to alleviate the part affected.

X

When

When a Strangury befalls the horse or bullock, bleeding, taking away the excrements, clysters and salt-petre, with other laxative salts, plentifully given in some barley-water, with gum Arabick dissolved therein, are the proper methods of cure—if these methods fail, opium should be given—Now it sometimes happens, that these animals have encysted tumours on the neck of the bladder, in which case I apprehend neither salt petre, nor any other medicine, will have any effect.

C H A P. II.

Treats of other disorders, to which the horse is liable.

WHEN recent coughs or colds happen, bleeding, repeated if necessary, warm moist diet, and the following medicine, will generally remove

move it.—Take two ounces of cold drawn linseed oil, of salt petre one ounce, volatile salt of hartshorn two drachms; this is to be given daily in some linseed, or liquorice tea, barley-water, or any such kind of vehicle; and above all things, let him be kept within doors, air and motion irritating the parts affected.

Let no man lend an ear to the advertisements of cures for broken-winded horses, how pompous soever they may appear—because, in this case, certain glands (called the lymphatick) which are placed upon the air-pipe at its entrance into the lungs, are become enlarged, and thereby the diameter of the tube is lessened — hence the received air cannot so readily make its escape, nor respiration be performed with such facility as before—from which quantity of contained air the lobes

of the lungs are always enlarged, as may be seen by examining the carcases of broken-winding horses, after they are dead.

Gripes or cholick are of two kinds; one proceeding from the drinking of cold water, the other from costiveness, and subsequent heat and inflammation of the bowels.

The first is cured by giving one ounce of philonium romanum, and by repeating it, if there be occasion.

In the second, bleeding is proper; which should be repeated if necessary, that is, if the pain appear to be very violent,—the excrement should be kept raked away, as it falls into the rectum, or strait gut.—Sweet oil should be given inwardly to relax the intestines,—and cooling laxative salts, every four hours,
to

to unload the same, for which purpose the neutral purging salts are the best, such as glauber salt, sal catharticum, with tartar soluble, &c. and oil given, by way of clysters will also be of use in this case.—Here salt petre is not so proper, because it acts as a diuretic, rather than a laxative.

Now this last kind of cholick, proceeding from costiveness and inflammation of the bowels, is what the writers and farriers call the strangullion, or twisting of the guts, and such they suppose it to be—yet this never happens, but the truth is—that certain particles or pieces of dung or excrement in passing thro' the guts, becoming hard and indurated from a degree of dryness, the space of the gut where it rests, is stretched and enlarged,—hence follows a narrowness or stricture round the adjacent part of the same, so that
the

the excrement cannot pass along—this occasions an inflammation, and the horse, if not soon relieved by cooling and relaxing medicines, dies of a mortification in such part—another cause may be a natural inflammation of some part of the intestines, where the excrement is not so lodged.

Thus you see how necessary it is carefully to distinguish betwixt these different kinds of cholick, which will be best done by observing whether there be a fever attending it or not—to ascertain the existence of which, or not, the pulsation of the artery is to be consulted, which may be felt on the hinder part of the fore leg, either above or below the knee of the horse.—Moreover, the horse in this last case will be frequently looking back into his flank, by which he points out in some measure the seat and nature of his

his disease, tho' not with absolute certainty — for the same symptoms will attend the horse afflicted with the stone or gravel (which by the bye I believe very seldom happens) but much certainty may be gathered even with respect to the difference of these complaints, by paying due attention to the nature and dryness of his dung or excrements, or his frequent attempts and motions to void his urine.—But which soever of these is the disease, thus far you will be right, that these remedies will be proper in each of these complaints.

With respect to forms of physick, every groom and every farrier has his receipts, which he still thinks the best — Now perhaps the ingredients given in general may have much the same effect — and if any mischief befall the horse, it is much more frequently
owing

owing to bad management, than to the
phyſick itſelf.

Yet ſuch medicines as are of a ſtimulating nature ſhould be avoided, becauſe they greatly deprive the intef-
tines of that mucus, which is deſign-
ed to line and guard them—from the
appearance of which mucus amongſt
the dung of the horſe, the farrier grave-
ly and wiſely remarks, that he is very
foul.

The miſchief that generally hap-
pens to the horſe in phyſick is owing
to this cauſe; namely, that the me-
dicines, not working ſo much, nor ſo
readily as may be wiſhed, the horſe is
trotted about till he is ready to drop, is
thrown into a heat, perhaps a ſweat,
by raiſing which new ſecretion, the
purging is entirely ſtopped, and a fe-
ver enſues, which terminates in the loſs
of

of eyes, of feet, or in death ; many instances of all which I have known.

When the crisis of a fever falls on the feet, on this or any other occasion, the proper method of acting is to cut them off round and short at the toe, till the blood appears, and with a drawing knife to score the hoof all round longitudinally at proper intervals of space (till you reach the quick) beginning a little below the coronary ring, and continuing the same to the end of the foot or toe ; hence the new hoof will have more liberty to push itself out, and the matter to be discharged ; the parts are to be dressed with some unctuous medicine, and the whole foot to be wrapped up with an emollient poultice—by which means the feet will often become as good and sound as ever.

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Now

Now this last method of scoring the foot longitudinally is of late come much into practice, with an intent to cure lameness arising from the contracted form of the same; which method, together with being turned to grass, expands the foot for a time; but when these scorings are quite grown out, and the horse is taken to house, such foot returns again in a short time to its primitive natural contracted state, and he becomes just as lame as he was before.

Of diseases of the eye I have little at present to say, having never seen any method of acting, but what is uncertain, and cannot be relied on, yet frequent bleeding, and the use of cooling laxative salts often are of great service.

There are so many forms of purging already prescribed, which, for any thing

thing I know to the contrary, may be all equally good, that it seems needless here to direct any ; yet, for the reader's amusement, I shall relate my own method.

I take of *Barbadoes* aloes a sufficient quantity, which given from one ounce to one and an half, is enough for most horses ; of powdered jallap two drachms, and because this resinous gum remains long in the stomach without dissolving, I add three drachms of salt of tartar, which is the proper menstruum or dissolvent thereof ; and to prevent griping, I add one ounce of ginger powdered.

But if the salt of tartar be mixed with the aloes, it becomes immediately so brittle, that it cannot be given in the form of a ball, wherefore I generally mix the aloes and jallap together

by the heat of the fire, and give it in a ball; and after that I give the ginger and salt of tartar in some warm ale.

Now it frequently happens, from the stimulating quality of the medicine, from too large a dose, or a weak habit of body, that a flux or purging continues many days; in this case give him gruel, made of boiled rice and water, with some gum Arabic dissolved therein, and repeat it; this will sheath the stimulated bowels: and philonium romanum, repeated at intervals of time (as occasion shall direct) will stop the purging, to which opium may be added, if there be need.—And when he will eat corn of any sort, let him have it; or rice, either boiled or raw.—But if he refuse all food, balls should be given him made of the flour of beans and rice.

The

The usual custom of treating horses, when they take physick, is to give them nothing to eat but hay, till the operation is over, and not to take them out on that day the physick is given.— But thinking I could find a method preferable to this on some occasions, I have often ventured to deviate from this good old custom, by giving the horse what corn he would eat, and by walking him out on the day he takes physick, but the next day, when it works, he does not go out at all, nor is allowed corn till the evening—and the only bad effects I have ever found from it, are, that walking him out the first day creates an appetite, that by filling his belly, he is less weakened, his blood is less impoverished — he recovers his strength much sooner, so that he will be able to hunt again in a short time, or to run his match, if he has any such depend-

depending.—Yet it must be confessed, there is one misfortune attends the horse in this way of purging, more than in the common one, which is, that he is hardly ever sick with it. — But a greater misfortune than this is, —that the generality of grooms and farriers hardly ever think a horse is benefited by physick, unless it makes him very ill, and reduces him almost to the degree of a dog-horse.—In this case the medicine I give him is composed of soap and aloes, which acts as a diuretick as well as a laxative, and is a medicine of much efficacy on many occasions.

And here occurs to me another good custom amongst the grooms, when they intend to purge their horses — and that is, to give them a sweat by way of stirring the humours (as they call it) the day before the physick is given ;

given ; but for my own part, I am so unhappy as to be of a quite contrary opinion in this matter, believing the horse should rather be kept cool and quiet for a few days before he takes it—for that this exercise certainly produces some degree of inflammation in the blood, which is very likely to be the cause of swellings in the extreme parts, if physick be given immediately after it—and which I am sure has often been the consequence of it, tho' imputed by grooms and farriers to foulness, —a term of art, which they best understand the meaning of.

Again, when horses have cold adematous swellings in the extreme parts, occasioned by the impoverished state of the blood and juices, or bad usage, the custom is to purge away, dose after dose, without knowing, that by such continued purging, they are doing

ing harm ; for the use of purges will render the blood and juices thinner, so that these swellings will be increased rather than removed, unless some proper warm medicines are given between whites, to amend the state of the blood.

When a horse is taken with a dysentery or scowering, to treat him first with medicines of an astringent quality is highly improper, but the cause of the disease should be first endeavour'd to be removed, by giving him toasted rhubarb and nutmeg, — and when this may have been supposed to operate, opium is the most effectual remedy, of which ten or twenty grains may be given at a time, and repeated as there is occasion ; and because the intestines are in this case strongly irritated, and their mucus carried off, his proper drink will be gruel made with
bean

bean flour, and some gum Arabick dissolved therein, his food should consist of rice and bean flour, and a small quantity of meat broth, without salt, thrown into the gut by way of clyster, would help to allay the irritation or stimulus of the same.

Worms will be cured by prepared mercury given in small quantities, by pewter, tin and oil; and I have been of opinion, that Botts too would be cured by the same means, but later experience proves the contrary.

It is worth remarking, that bitters can be no antidote to botts, because they have been often found alive in the duodenum, into which the bilious juice or gall is immediately discharged, than which nothing is more bitter.

Can bitters then have any better effects on worms, than on Botts, if they

are there found alive too?—It appears from experiments also, that worms put into the strongest bitters, live as long, as they do in common water.

But having lately had an opportunity of opening a horse that died in convulsions, who was known to have been troubled with Botts, and who had, in order to be cured of them, taken a considerable quantity of all these medicines for a considerable time before, I found a great number of them in the stomach, which was in some parts nearly eaten through, and the intestines were in some places eaten quite through.

M. *De Reaumur*, in his history of insects, has made some curious observations on this subject of Botts in horses——He begins with saying,—

‘ Amongst

‘ Amongst the animals that are useful to mankind, the horse is certainly entitled to the first rank, and yet this animal, considerable as it is, and contrived by its figure and beautiful proportion to afford us pleasure, was not given to mankind alone, — there is a species of fly, whose right in this creature may be looked upon as still better founded than our own.—

Now if this should happen to be true, what a mortifying circumstance, and stumbling-block of offence, it will be to those unphilosophical people, whom pride and custom have taught to believe, that all things were made for man alone.—He goes on to say,

‘ If the horse be useful to us, he is absolutely necessary to the fly — the

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‘ If the horse be useful to us, he is
 ‘ absolutely necessary to the fly — the

' same Being that formed the horse,
 ' formed also this fly, which depends
 ' wholly on the horse for its prefer-
 ' vation and continuance. The flies
 ' we are speaking of, like those of all
 ' the other species, receive their first
 ' life and growth in the form of
 ' worms,—but these are worms that
 ' can be produced and nourished only
 ' in the intestines of a horse:—It
 ' is there alone they can enjoy the
 ' proper temperature of heat, and
 ' receive the nourishment necessary for
 ' them.

' Besides the long, and sometimes
 ' very long worms which have been
 ' observed in the bodies of horses, there
 ' have been seen also short ones.—

(By these are to be understood what
 we call Botts.)

' All

' All Authors, both ancient and
 ' modern, who have treated of the
 ' diseases of horses, have taken notice
 ' of these short worms,—but M. *Val-*
 ' *lisnieri* is, I believe, the first who
 ' has traced them to the last stage of
 ' their transformation, and has seen
 ' them change into a hairy kind of fly,
 ' like the drone.

' The flies from which these Botts
 ' are produced inhabit the country,
 ' and do not come near houses, at least
 ' not near those of great towns; and
 ' therefore horses are never liable to
 ' have these short worms (i. e. *Botts*)
 ' in their bodies; if they have been
 ' kept in the house, especially in a
 ' town, during the summer and au-
 ' tumn.

It

It is in the former of these seasons, and perhaps too in the beginning of the latter, that the females of these flies apply themselves to the anus of horses, and endeavour to gain admittance, in order there to deposit their eggs, or perhaps their worms.

The precise instant of their entrance will scarce admit of an eye-witness, but by the meerest chance; yet *M. Vallisnieri* says, that Dr. *Gaspari* had attained this very uncommon sight. — The doctor (he tells you) was one day looking at his mares in the field, and from being very quiet he observed, that of a sudden they became very restless, and ran about in great agitation, prancing, plunging, and kicking, with violent motions of their tails. He concluded, that

' that these extraordinary effects were
 ' produced by some fly buzzing about
 ' them, and endeavouring to settle
 ' upon the anus of one of them; but
 ' the fly not being able to succeed, he
 ' observed it to go off with less noise
 ' than before, towards a mare that
 ' was feeding at a distance from the
 ' rest; and now the fly taking a more
 ' effectual method to obtain its design,
 ' passed under the tail of the mare,
 ' and so made its way to the anus.

' Here at first it occasioned only an
 ' itching, by which the intestine was
 ' protruded with an encreased aperture
 ' of the anus; the fly taking the ad-
 ' vantage of this penetrated further,
 ' and secured itself in the folds of the
 ' intestine;—this effected, it was in
 ' a situation proper for laying its eggs.
 ' Soon after this the mare became very
 ' violent, running about, prancing,
 ' and

and kicking, and throwing herself
on the ground ; in short was not
quiet, nor returned to feeding, till
after a quarter of an hour.

The fly then we see can find
means of depositing its eggs, or per-
haps its worms (*i. e. Bots*) in the
fundament of the horse, which, once
effected, it has done all that is ne-
cessary for them.

If these worms (*i. e. Bots*) are
not hatched when first deposited in
the horse, but are then only eggs,
it will not be long before it happens,
from the nutritive heat they there re-
ceive.

These (*Bot*) worms, soon make
their way into the intestines of the
horse ; they occupy such parts of
this region, as are to them most con-
venient ;

convenient, and sometimes (as we shall
 see presently) they penetrate even to
 the stomach:—All the hazard they
 appear to be exposed to is, that of
 being carried away from the places
 they have fixed on by the excrement,
 which may seem likely to drive all
 before it. —But nature has provided
 for all things, and when we shall
 have further described these (*Bott*)
 worms, it will be seen that they are
 able to maintain their situation, and
 to remain in the body of the horse
 as long as they please.

There is a time when these (*Bott*)
 worms are of themselves desirous to
 leave this their habitation, it being
 no longer convenient to them after
 the purposes of their growth are an-
 swered. Their transformation to a
 fly must be performed out of the
 horse's body, and accordingly, when

A a the

' the time of their transformation
 ' draws near, they approach towards
 ' the anus of the horse, and then leave
 ' him of their own accord, or with
 ' the excrement, with which they
 ' then suffer themselves to be carried
 ' along.

' The figure of these (*Bott*) worms
 ' affords at first sight nothing remark-
 ' able, but they appear like many o-
 ' ther worms of the first class, to
 ' which they belong, that change in-
 ' to flies with two wings, and like the
 ' greatest part of the worms of that
 ' class, they are provided with a sort of
 ' scaly claws, with which they draw
 ' themselves forward.

' There is a difference in colour ob-
 ' servable between those that are taken
 ' by force from the intestine of the
 ' horse, and those which come away
 ' of

of their own accord; some are greenish, some yellowish, and others nearly brown; these last are nearest, and the greenish ones the farthest from the time of their transformation.

If M. *Vallisneri* and myself have rightly observed the position of their claws, some of them differ from each other in this respect, but are perfectly similar in every other particular, and which change into flies so nearly alike, that I am convinced, they are of the same kind and origin.

However this be, the (*Bott*) worms, which are the subject of our present pursuit, have two unequal claws; and since I have been acquainted with the nature and use of them, I have had no difficulty to conceive, how they may still remain in the intestines of the horse, in position

A a 2

position to all efforts of the exertment to force them out — one of which, that I was handling and examining, fastened upon my finger in such a manner, that I found great difficulty to disengage myself. These claws are a sort of anchor, differently indeed disposed from those of common anchors, but contrived to produce the same effect.

Besides these two claws, nature hath given to each of these (*Bott*) worms a very great number of triangular spines or bristles, very sufficient to arm them against the coats of the intestines, and to resist the force employed to drive them towards the anus, provided the head be directed towards the stomach of the horse.

It

‘ It will be asked, no doubt, if
 ‘ these (*Bott*) worms are not dan-
 ‘ gerous to horses? — The mares which
 ‘ afforded me, for several years, those on
 ‘ which I made my observations, did
 ‘ not appear to be less in health, than
 ‘ those which had none; — but it may
 ‘ sometimes happen, that they are in
 ‘ so great a quantity in the body of the
 ‘ horse, as to prove fatal to him. —
 ‘ M. *Vallisnieri* supposes these (*Bott*)
 ‘ worms, to have been the cause of
 ‘ an epidemical disease, that destroyed
 ‘ a great many horses about *Verona*
 ‘ and *Mantua* in the year 1713 — the
 ‘ observations communicated to him
 ‘ by Dr. *Gaspari* sufficiently confirm
 ‘ his supposition.

‘ This gentleman, upon dissecting
 ‘ some horses that died of this distem-
 ‘ per, found in their stomachs a sur-
 ‘ prising

‘prising quantity of short worms, of
 ‘which, to give us some idea, he
 ‘compares them to the kernels of a
 ‘pomegranate opened—each of these,
 ‘by gnawing on the coat of the sto-
 ‘mach, had made for itself a kind
 ‘of cellule therein—each of these ca-
 ‘vities would easily contain a grain of
 ‘*Indian* wheat.

‘It is easy to imagine by this means
 ‘the stomach must be reduced to a
 ‘wretched condition, the outer mem-
 ‘branes were inflamed, and the inner
 ‘ones ulcerated and corrupted; a very
 ‘small quantity of these worms were
 ‘found in the small intestines, and only
 ‘a few in the larger, to which last they
 ‘were found affixed, but had not
 ‘corroded them.

‘It is only perhaps when these
 ‘(*Bott*) worms are in great numbers,
 ‘and

' and thereby incommode each other
 ' in the intestines of the horse, that
 ' they make their way towards the
 ' stomach—and indeed a very few
 ' flies must be enough to overstock the
 ' inside of a horse, provided, they
 ' should deposit all their eggs, and such
 ' should all be animated, M. *Vallisneri*
 ' *eri* having counted seven hundred and
 ' odd in the body of one single fly.

' When one of these Botts has left the
 ' anus of the horse, it falls on the
 ' ground, and immediately seeks out
 ' for some place of safety, where it
 ' may retire, to prepare for the last
 ' stage of its transformation, by which
 ' it is to become a fly.

' And now by degrees the skin har-
 ' dens, and thickens, and at length
 ' forms a solid shell or cod, the form
 ' of

of which scarce differs from that of
the worm.

It is first of a pale red colour,
which changes into chesnut, and at
length, by the addition of gradual
and successive shades of brown, the
shell is rendered black.

The worm or Bött before it passes
into a nymph is of the form of an ob-
long ball; it remains in this form much
longer than worms of the flesh fly
kind. — I have met with worms, that
retained this figure five or six days
— as yet one can perceive no traces
of the legs, wings, and head of the
nymph. — Hence I first learned, that
these (*Bött*) worms do not become
nymphs immediately upon their first
change, but that, in order to become
flies, they must undergo one change
more

‘ more than caterpillars ordinarily do
 ‘ to become butterflies.’

This is an abstract only of what *Reaumur* has related in one of his memoirs, to whom the curious reader is referred for a more ample account of this matter.

This doctrine, and our own observation, will teach us some truths worth knowing.—First, that horses may occasionally die with spasms, and convulsions, when these botts lodge in the stomach and intestines, and corrode the same, instead of coming away by the anus. Secondly, that no medicines ought to be esteemed a remedy for the botts, till we see them brought away dead by their effects; and therefore, if they did not generally make their escape by some law unknown to us,

B b

horses

horses would die much more frequently than they do with these insects.

Now I'll shew you how to cure them.

Take of new milk one quart, honey half a pound, give the horse this in a morning, let him fast after it an hour and a half, then give him a pint of strong brine, more or less, according to the size and strength of your horse, fasting after that, another hour; repeat this three or four successive mornings; this destroys them, and leaves no appearance but of their skins, or shells, which are brought away with the excrement—and this will kill worms of all sorts and sizes.

The farcy arises from vitiated blood, and when caught, as it may be by licking the matter from other horses, the same effect will be produced.

When

When the skin breaks, and buds of sprouting fungous flesh appear on any part, such are to be touched with a rag dipped in corrosive spirit of salt, strong spirit of nitre, aqua fortis, or any such kind of medicine.

When swellings fall on any part, which is no uncommon symptom in this disorder, a poultice made with the emollient fomentation thickened with oatmeal, is to be applied thereto twice a day.

With respect to malenders, swelled legs, scratches, scurfy heels, what is called the grease, and such like disorders; these all proceed from a languid and obstructed circulation, whence ensues a coldness in the extreme parts.—The remedy for these, is warm fomentations applied to the parts; good rubbing

bing of the limbs is necessary, and a poultice composed of rye-meal, and milk, is a proper application to sore heels; all unctious things doing more harm than good. The habit of body is to be altered, for which purpose the medicines, that are most proper to be taken internally for all these disorders, shall be spoken of by and by.

Now the virtues of salt or sea-water are in these cases very remarkable, for having occasionally lived near the sea-side, I could not help observing the effects of it. It is a custom at *Margate*, in *Kent*, when people bathe, to be drawn a little distance into the sea, in a machine with one horse, who by a constant succession remains in the sea perhaps every day of his life, for four, or five or six hours together, and whatsoever ulcers or cutaneous disorders the horse may chance to have, he is by such

such practice continued for a time sure to be cured of, I mean in such parts as the water can reach.

And the virtues of salt water would, I believe, extend farther than are yet known, if they were under proper consideration—instance, in the case of people being bit by mad dogs, that are sent to sea to be dipped, some are cured, some are not—and I believe it is owing to this cause, that they are not all cured — namely, that it does not operate alike on all men, for some who can swim well, having no fear of drowning, tho' perhaps ~~some~~ souf-
ed by the dippers, receive none of this water into their stomach—others that cannot swim, what between the fear of being drowned, and gaping for breath, do often imbibe a great quantity of this water, and are hereby strongly operated upon both upwards
and

terribly

and downwards; and in these operations, I think, consist the virtue and effects of sea-water, as an antidote to madness, and not in the act of bathing—and what confirms me in this opinion, is, that if one dog be bit by another, in ever so severe a manner, even in the head, which is thought incurable, such dog, by often taking turpeth mineral, that operates upon him upwards or downwards, or either way, will I venture to say be most certainly cured, at least I have always found it so—and this effect, I think, is brought about by the actions of these medicines, and not by any specifick quality; either of the salt or the mercury—for there is no medicine in the world, that can properly be said to contain any specifick quality, but when we know not how to account for the effects or modes of operation in any medicine, we, to keep up the shew of knowledge,

knowledge, and to gratify our own pride, have recourse to hard words, or terms of art, that serve in reality to betray our ignorance. —But sea-water has by no means an equal chance in this respect with other physical remedies, for in these last you persist for a time, and go through a long course or regimen; whereas, in the other case, you are dipped once, and gone about your business.—But if there be any virtue in sea-water, that may be an antidote to the bite of a mad dog—as undoubtedly there appears to be from many instances, why not stay and make sure of it, by continuing to bathe, and to drink also for a length of time!

And with respect to the medical use of salt, it may perhaps be of as much service to mankind in many disorders, as it is to the brute creation; respect
being

being had to the difference thereof, for the sake of constitution.

For in scrophulous and scorbutic complaints, gravel, cholicky Pains, proceeding from heated bowels, in fevers, inflammatory disorders of all kinds, bilious obstructions, rheumatic complaints, in intervals of the gout, and many other chronical disorders, it will be found a medicine of great efficacy, if continued to be taken for a time.

But the misfortune of all medicines, intended as alteratives, is, that the patient expects to be cured in a few weeks, of a disorder he has been treasuring up for many years, and perhaps continues daily to do the same.

To cleanse the stomach from slimy viscid juices, salt will be found a proper remedy, as may be gathered from the use of sea-water, which, if taken

too freely, will operate not only on the stomach, but on the coats of the intestines also, in such a manner, as greatly to discharge their mucus, and produce violent bloody fluxes, various instances of which have been known.

Now food and climate I take to be the origin of all disease; — by which two things, the bile or gall is more immediately and primarily affected in all countries, and in all constitutions.

From which last source the generality of chronical disorders, and some acute ones are also derived.

The use of this bile is to complete the digestion by assimilating the food, and rendering its juices fit to enter the lactical vessels. — It is the soap, or menstruum of the body. — The fountain and origin of all other secretions (on

the regularity of which health depends) without which (Bile) every animal on the earth would soon fall into a state of putrefaction.

Hence I have been led to think, that what we call real diseases, howsoever distinguished by their various names and symptoms, are, perhaps, no more in general, than secondary effects, produced by the state and nature of the bile, and the secretion thereof.

In colder climates, or inactive life, this bilious juice is more sparingly secreted; hence the various kinds or loads of aliment imposed on the stomach, not being duly assimilated, either from the quantity or quality of this juice, other subordinate secretions, depending on this proper one of the bile, will not be regularly, or truly promoted.

Hence

Hence obstructions will arise of various kinds, and different men will be variously affected, according to the different organism of their bodily system.

And what we call hereditary disease, depends altogether (as I conceive) on the particular frame and texture of these bodily organs, and is not any real latent disorder, as it is generally understood, or, as Mr. Pope says,

The young disease, that must subdue at length,

But from a similar cause, or habit of body in the parent and the offspring, similar effects are occasionally produced — and this doctrine will be more fully explained by observing, that one son shall be afflicted with the same disease his father had; and yet another, tho' perhaps not so moderate a

liver, shall escape this disease, by be-
 ing constituted like the mother.

To this it may be objected, that
 many people, who were always very
 abstemious livers, have been, even
 from their younger days, afflicted with
 the very same disease their fathers had,
 and therefore such disease is real and
 self-existent. To which I answer, that
 the effect of climate, as well as of
 food, will bring on particular diseases,
 on persons particularly constituted; —
 for instance, many people afflicted
 with the gout, scurvy, rheumatism,
 and so forth, in one climate, shall, by
 living in another, entirely lose such
 complaints.

Again, in some of the eastern coun-
 tries many people, particularly those
 of a corpulent habit of body, not cir-
 cumcised, are very subject to ulcers

under

under the foreskin of the penis, which in time, for want of due care and cleanliness, become virulent and infectious.—Hence we may learn, that some diseases derive their origin from climate alone, and that the institution of circumcision in such countries for any society of people, who intended to keep themselves clean and free from infection, was a very wise one, whether it was ordained by divine or human authority, tho' most likely to be observed, when propagated as a religious law.

Now in all diseases arising from obstruction, salt will be found a good medicine.

In hotter climates, diseases in general arise from too copious a secretion of this bilious juice.—In these circumstances it is probable, the use of
salts

salts would prove detrimental. — And I have been told by a very judicious surgeon, who was some years in the *East Indies*, and who was also fond of giving nitre in fevers, from the success he had occasionally observed attending it, that this medicine, given in fevers peculiar to that country, was, according to his observation, very destructive; and that, by its promoting still greater secretions of the bile, immoderate fluxes were produced, which generally ended in death.

Perhaps also the different complexions of mankind, inhabiting the various parts of this terrestrial world, depend alone on the secretion of this bilious juice. — The colour of a black arising from nothing else than a kind of mucus, which is retained between the skin and the cuticle; the fibres of the skin being white in all men.

How

How absurdly then do such people argue, who maintain, that there are two sorts of men created by the Almighty, one destined to slavery, the other to wealth and power. The effect alone of arts and arms,

CH A P. III.

Against any innate qualities in horses, which the sportsmen call blood.

NOW my opinion is, that the origin of all men, as well as of all animals of the same species, was the same in the beginning of time, and that it is climate chiefly which produces the difference we perceive in them.

Amongst the horses produced in different countries, we may perceive a great

great difference in their performance, and I think in their figure also; and this difference of performance has generally been imputed to a term called blood, which the sportsmen say is a certain innate or præternatural virtue, peculiarly belonging to some horses, and not to others; and it being a proverb amongst them, that all shapes run, they would be understood to mean, and do on some occasions assert, with the firmest belief, that this virtue or excellence is quite independent of matter, and of the formation of parts, and then of course it must be altogether undistinguishable to the eye—and whenever I shall have occasion to mention the word blood, I would have it understood as something independent of form and matter, just in this same light as they always use it.

Amongst the horses produced in different countries, we may observe a great variety of blood.

But my opinion herein differing from the generality of mankind, I did once set down my thoughts on this subject, in a small essay, called, *A dissertation on the breed of horses*, to which many objections having been made, I have taken this opportunity of making some reply to them, hoping to set this matter in somewhat a clearer light, in which my only design is, to have our breed of horses improved.

It has been objected, that this dissertation before-mentioned tends only to prove, that all horses of a fine shape will make good racers, let their breed or sort be what it will; to which I can only answer, that I am very sorry, I should have expressed myself so ill, as to give rise to such an opinion, for whatever some readers may have conceived from the doctrine therein ad-

vanced, my meaning has been very different.

And it has not only been far from my design to advance any such maxim, but I think I have, as plain as words can set forth my meaning, said the contrary in various parts of that essay, particularly in page 8, 10, 11, 12, 13, 14, 44, 45, 46, 47, 48. — But how unhappily soever I have expressed myself in that essay, my design was to shew, that the swiftness, and the ability of perseverance, we find belonging to some of these *Arabian* horses, and their descendants, depended alone on their particular formation and elegance of parts, &c. which being as I thought visible to the eye, I did conclude the excellence of all horses to be merely mechanical.

To

To this it is objected, that the formation of parts can have nothing to do with the action of horses, we call bred ones, because mankind has not agreed what this particular formation in race-horses should be. — It is very true, they have not, — nor have they agreed about any one thing whatsoever, that I know of. But the agreement or disagreement of mens opinions will neither add to, nor detract from the real existence or truth of things; nor would it any ways alter their nature, even tho' the philosophy of the scepticks should become universal.

What this particular formation necessary to the being of a perfect race-horse is (for such I am talking about) has been partly shewn in that essay before published, but that not being

of sufficient force to carry conviction along with it, I shall here attempt to explain the matter a little farther, merely for my own satisfaction, not thinking, that any thing I can advance, will influence the minds of some men, few being willing to relinquish their old opinions, or to subscribe to a doctrine, which they themselves have not discovered, or cannot account for by their own discernment—and that people in the racing-way should never have discovered a peculiar elegance, and different formation in some horses, is not to be wondered at, such having ever employed their thoughts and attention to the blood only,—being fully persuaded, time out of mind, that the excellence of horses consisted in that alone.

The formation then, which I conceive necessary to constitute a capital
and

and perfect race-horse, does not relate only to the proportion and symmetry of the whole, which some men say is the doctrine I have advanced, tho' it be a necessary ingredient to perseverance or bottom, and is a *sine qua non*, but it extends also to the limbs and joints, by which his motions are performed, and to a particular manner of their being set on—And this formation has been in part explained in the essay before-mentioned, where the necessity of length is shewn, and that besides a general length in the horse, there is or should be a certain propriety of length determined to some particular parts.

For instance, the race-horse should be broad, deep, and have a great declivity in his shoulders, his quarters should be long and strait, his thighs should be let down very low, his hock should stand far behind, and from
him,

him, thence downwards to the next joint he should be very short, which part of the leg should not be strait, but stand under him, like an ostrich's leg, with a long lax bending pastern; and these I think are in part the springs of action.

Now I should be glad to be informed, whether the remarkable speed that ostriches are said to have, any way depends on this formation, and setting on of their limbs, or on the same innate virtue, called blood, as the action of horses is said to depend on.

And these are not the only requisites necessary to the formation of a perfect race-horse, there being as much difference, and as great a nicety required in the manner of setting on a horse's arm, which should be at the extreme point of the shoulder, as in any part be-

belonging to him, and which contributes to the act of extension, as well as the declivity in the shoulders :—nor is one horse in fifty properly formed at the knee for racing ; nor does one in a hundred of any sort bear a true proportion from the knee to the fetlock-joint, tho' it be very material with respect to every action he is to perform.—Yet most or all of these things have passed unobserved by the generality of sportsmen—Not that I think it at all conclusive, that either the master or the servant should be obliged to understand the true properties, or even the formation necessary to make a race-horse, because one has the care and management of his food and exercise, and the other has the pleasure of seeing him twice a year, and paying the expence.

By

By the true position of these joints and limbs, the horse is obliged to stand over more ground than one that is otherwise formed, even tho' the length of body be the same in both, and by describing so much a greater circle, he is enabled, when he extends himself to go on, to make a greater acquisition or purchase of ground, than the horse who stands in a more upright position, even tho' the latter be the longest of the two.

The proper formation of some of the outward acting parts (or at least what I think so) having been described, let us now consider, what else is wanting to make a perfect race-horse: — why, a general proportion, length, muscular substance, and a certain elegance of texture, and of the constituent parts of the whole; the nature
of

of which (elegance) or what I mean by it, shall be explained by and by.

Now supposing the condition of horses to be always alike, they will always excel each other according to the particular elegance and formation of these acting parts, degrees of proportion, of length, and of muscular substance, the want or the possession of either of which, will not only produce their effect in all horses, but a difference also in the very same horses tried together on different kinds of ground; —and this I think cannot be otherwise —for if a different formation of the parts, &c. and degrees thereof be not the cause of different performance in horses, why then one of these horses of the right and true blood would act alike on all ground, and be just as good, tho' he was made like a hog, or without joints, unless some other cause of action

in horses can be shewn, besides this virtue of the blood, or the formation of the parts, &c.—And this argument alone would, I think, be sufficient to evince the truth of my doctrine, if there was no other to be found in support of it.

And the difference in these requisites before-named will also account for the reasons, why some very plain horses, that are not well made to please the eye, and so are called ill-shaped ones, shall by means of a greater length and depth, and a peculiar manner of setting on these acting parts, excel others, who, with the same elegance, possess a greater share of muscular substance and proportion, a more noble and lofty forehead, and a finer figure throughout the whole.—And so the handsomest and most elegant horse in the world, and of true proportion too,

too, who wants a proper declivity, length and circular extent in these acting parts, may be no racer at all.

Again, horses with the same elegance, and a tolerable formation of these acting parts, shall be able, by a superiority of muscular substance, and a more general proportion, to excel those, that have a little more length and depth in these acting parts ; for by means of this substance and proportion, they will bear to be pressed longer than those who are deficient therein—and so far the good old proverb, namely, that all shapes run, may be allowed to be true enough.

Again, we may often see horses, that can boast of no blood or pedigree, which we deem ill-shaped ones, surpassing others of a finer figure, and which we call handsome horses.—Pray

does the performance of such ugly half-bred horses depend on the formation of the acting parts, their proper length and extent, the circle they describe in their shape, and the peculiar manner of these parts being set on, or on any innate quality?—or why may not the man, who cannot discern this particularity of formation in the half-bred horse, say, that his excellence depends on some innate quality, with as much reason and truth on his side, as the sportsman has for attributing the excellence of some bred horses, whose performance he cannot account for, by the eye, to this same innate cause?—when I talk of length and extent in the acting parts, I desire not to be misunderstood, for no horses legs can be too short.

Now where is he, who will take upon him to say, that some men are not
able

able to distinguish by the eye this difference of formation betwixt some horses, as well as others can distinguish this difference betwixt some dogs—tho' perhaps not quite so readily, because the human eye cannot take in at one view, the parts and proportion of a being, where one is so much larger than the other.

Whose eye does not inform him, that a greyhound will beat a cur dog, or that a bred horse (as it is called) will beat a cart horse? then why not a difference betwixt two bred horses, for he who does not perceive, that many such do differ greatly from each other, I think cannot see at all.

Tho' many sorts of dogs are as long as the greyhound, every eye may see, that one will excel the other, and that from the curves and circles, which one de-

describes in his shape, and which the other has in a less degree.

- Fine greyhounds have, like fine horses, a general proportion, a certain elegance of parts, length, and are full of muscles, and their hocks are let down almost to the ground behind, and stand from them, and to supply the want of a long pastern, their feet or toes are made longer than any other dogs that can be named.

It is this very formation so obvious in a greyhound, and in some horses, that in part produces the effect of speed; and the reason, why it is not so manifest to all men in both species, is, because the degrees of this formation do not come so near together in dogs, as in horses, that of the greyhound far excelling all others.

length

Now

Now the fine greyhound is remarkably broad, and expanded in the muscles of his thighs; this I call a perfection.—And so I think it is in horses, tho' it be but seldom seen. This the sportsmen esteem a fault, and what moves my laughter, they call it a coach quarter—So little likelihood is there of any agreement amongst mankind about the proper formation of a race-horse, that they have not so much as agreed upon the names, whereby to distinguish the different parts thereof, even tho' the muscular expansions ought to be very different in these parts, when we require a perfect horse of any sort.

Hares are made in the same manner, and they can describe a greater circle, and acquire more ground at one stroke, than any animal that I know of, in the whole world, of their size and length,

length, and that because their quarters are so long, their thighs are so much let down, and the lower part of their hinder legs are placed (as it were) under them, and to answer the purpose of a long pastern, their toes are made very long.—From these causes I am inclined to think her springs of action are in part derived—add to this, the blade-bone of no animal runs away into her back with so much declivity as a hare's, and this, I think, enables her to point forward.—Again, mark the length from her elbow to the knee, and the short space there is betwixt that and the next joint; by this length of the arm, and the muscles thereof, she can farther extend her fore-parts—so it is in a greyhound, tho' not, I think, in so many degrees; and this formation in degree so far appertains to the horse, that he cannot be called perfect without it, let him be

ever

ever so well constituted in all other respects.—But the degree of shortness in this part of the horse is better considered by the proportion it bears to his other parts, than by any general rule that can be laid down.

Now it is well known, that the hare can strike as far at a stroke as the greyhound dog, who is much longer;—tell me then, are her motions performed by the peculiar formation of the acting parts, and the strength and elegance of her muscles, or by any innate quality, and unknown virtue; or whether, from a similitude in these points found in all animals that are particularly endowed with speed, there may not be some reason to suppose, that the cause of it is the same in each?—and whether it be not highly probable, that the power who created all animals, has ordained, that the differ-

ent degrees of speed in different horses, should depend on the very same law as the different degrees of speed in different dogs, I mean the law of their constituent parts; even tho' you and I should happen not to perceive any difference in such parts.

I have often been surprized, and diverted too with the commendations I have heard the sportsmen bestow on horses, for having large bones, because I think on the contrary depends in great measure the excellence we find in what are called bred horses.

If by this expression substance only was to be understood, it would be quite agreeable to my notion, as I have said before, but what constitutes the great difference, formation of the acting parts excepted, between the *Arabian* horses, and all others, is, that some of them have, and all should have, to
be

be perfect, larger muscles or sinews, and smaller bones, than any other horses in the known world, for these muscles or sinews happen to be the sole powers of acting in all animals, the bones being the weight to be lifted, and serve only to extend the parts.

Which now will act with most velocity, and most perseverance of time, (all other parts alike) the horse that has a large sinew, and a small solid bone, like ivory, or like a deer's bone, or he that has a large bone of a soft spongy kind, with a smaller sinew? for the dimensions of the leg shall, if you please, be the same in both—I should think the former.

This solid bone with a firm sinew, and a fine skin super-induced, where you may see every vein, and can lay your finger between the bone and the

sinew, shews, that the horse has no thick fleshy membrane intervening, which serves only to retard his speed, and is like the bone, a dead weight, to be carried along with it, and which no way conduces to the strength of the animal.

Now this is what I call elegance of parts, which is not confined to the outward texture only, but extends also to the internal constituent parts, namely, to the bones, sinews, and membranes, which is in part explained already—and to all the ligaments of the joints—and this elegance of the constituent parts shews itself particularly in many horses, where, tho' the leg shall have a very sufficient substance, and bear a true proportion to the other parts of the body, yet the pastern shall be very lax, as well as very small, both which are very necessary for a perfect race-

race-horse, length and laxness serving as springs for the acquisition of ground, smallness contributing to agility, and to perseverance or bottom.

That the smallness of the pastern shall contribute to the stoutness or bottom of the horse, you will say is very strange, and new doctrine, it being always looked upon as a sign of weakness—that I can't help—But if there was no other argument to support this doctrine, examples enough of horses so made, that were excellent racers, might be brought in defence of it, and I think no body will dispute matters of fact—tho' I am not quite sure of that.

For instance, *Cartouch* was a remarkable horse, in these respects; who, tho' but a galloway, beat some good and sized horses very easily, all carrying eleven stone.

That

and becomes tendinous or sinewy, tho
it will be the same body—and you
That horses run well with short pas-
terns, is no reason they should not run
better, *cæteris paribus*.

Now to explain this doctrine about
the smallness of the pastern, as it re-
lates to bottom.

You must understand, that all the
difference there is in any animal be-
twixt a muscle and a sinew, is, that
the fibres of the first are broad and
fleshy, those of the last are more firm,
and driven into closer contact—By
means of which the strength of a small
sinew becomes greater than the strength
of a large piece of flesh—for instance
now,—your leg and mine—the hinder
of it is upwards at the calf a fleshy sub-
stance, which anatomists have agreed
to call a muscle; lower down, towards
the extremities, this is more compact,
and

part

and becomes tendinous or finewy, tho' it still be the same body——and you find it in all actions capable of bearing its share of work, without complaining, which the calves of the legs often do, after much walking, or any violent exercise.

I pray you now to tell me, whether you ever thought a man, who was well formed in all other respects, to have less agility, or less strength, because the small of the leg was very delicate and slender? or if your leg and mine had been covered with a thick coarse membrane, and composed of loose fleshy fibres, continued down to the extremities, instead of being fine and tendinous, whether you don't think, that such a weight would have been against us, have made us less active, and to have tired sooner? just so it is with the horse——But when
the

the wise designs of nature are not fathomed by our shallow capacities, we arraign the skill of the omniscient power, and foolishly presume to censure his works, when they are most perfect.

In these things alone, I mean the nature and elegance of their constituent parts, and the formation thereof, consists the difference between horses of the same, and different countries, or betwixt blood, and no blood.

Now ask the sportsman, how it happens, that some of these long patterned horses perform so notably, he has his answer ready, why 'tis in the blood to be sure, or else these weak cat-legged devils could not run so.

The sportsmen have a saying, such a horse shews a great deal of blood—
surely

surely they think it something mechanical, and visible to the eye, else they could not use this expression, or do they pretend to discover, by innate knowledge, the innate virtues of the animal?—But they mean, if they mean any thing, what I do, when I say such a horse has a peculiar elegance in the texture of the external parts—And why the *Arabian* horses differ from those of other countries, either in the formation or elegance of their parts, is not at all material for us to know.

Now the *Arabian* horses, of the very same family, as I am informed by people, that I think are very good judges, who have lived in the eastern countries for years together, differ as much from each other, both with respect to length, substance, proportion, elegance, and formation of parts, as horses of the same family can do in

G g

other

other countries; and how should it be otherwise? for we plainly perceive here at home, that there often is a great difference betwixt two full brothers, of all kinds or species of animals: pray now tell me, why this should not happen in *Arabia*, as well as in *England*.

For instance, *Conqueror* and *Othello* were two full brothers, but one was a king and the other a beggar with respect both to form and action. — If now the difference in the performance of these two brothers did not depend on their different formation of parts, &c. pray tell me, on what it did depend? for the cause of it could not be in the blood, unless you will say this innate quality may appertain to one brother, and not to another; and then I am afraid the by-standers will say, you have proved it to be plainly nothing.

A hundred examples of the same kind, and that almost in every family amongst our racing-horses, might be brought to shew, that two equal brothers are hardly ever produced, and when a difference does happen, it will be just the same thing in its consequences (if the formation of parts, &c. be at all concerned in action) whether it happen to an *Arabian* horse, or any other.

Why this difference should be betwixt two full brothers is not at all material for us to know; it is sufficient for my purpose that it does happen—It may arise perhaps from a dissimilitude of parts in the horse and mare, or from a similitude of some parts tending to some extreme in both; it may arise also from some violence or impression on the womb, whilst the foetus is in a

soft state, or from some defect of constitution in the mare, or the seed of the horse.

These reasons, and the instance before-mentioned between *Othello* and *Conqueror*, besides others which might be quoted, will serve to shew, that the laws of nature are not always certain, even when the horse and mare are put together with the utmost propriety and perfection, which I believe seldom happens here, the formation of the parts of either being hardly ever thought of amongst the breeders of running-horses. And hence I suppose it will be allowed, that the same effects may be produced in all countries; and that the *Arabian* horses of the same family may differ from each other, as well as those of other countries; and that in as many degrees—Yet when we have the happiness to obtain one of these

these mean cast off *Arabians*, for I think few others fall to our share, after we have bred from him some years, and find his colts deficient, we cry out he is not of the right or true blood, — *rifum teneatis*? such skill have we in horses, and such are our ways of reasoning.

If I could have a horse formed in the manner, and with all the advantages I have here named, I should be proud to use him as a stallion, was I a breeder, without making any enquiry after his family or country—But shall the brother of this horse, because he is brought from the mountains of *Arabia*, and of the very best reputed high blood (as it is called) who is deficient in all or most of these respects, (no matter from what cause) induce me to breed from him, for the sake of his family and his country? — and that

a great

a great difference does occasionally happen in the same, and in every family of horses, I suppose no man will deny.

But it is said—that the virtue of the blood in him that was no racer, may produce a racing son—yes—so it may, when the son has happened to acquire a formation of parts, &c. different from the fathers, by the help of his mother—there indeed an ill-formed horse, that could not run himself, may beget a better racer than himself, by the assistance of better parts derived from, and similar to those of the dam—if it be otherwise, it does not signify at all, how the father, son or mother shall be formed, whether like a horse, or an ass, a wild boar, or a sea fish, so that they are of the right blood.

And

And there we may observe, how different the opinion amongst sportsmen, of breeding from a horse, who was no racer, for the sake of his country or family, is, to that of *Virgil*, who, speaking of a proper stallion, says thus,

*Aequè—magistri
Exquirunt, calidumque animis et caribus acriem,
Quamvis, &c.—
Et patriam epirum referat, fortesque mycenae,
Neptunique ipsâ deducat origine gentem—*

Which, I think, in plain *English*, is to say—

Your good judges of breeding require a stallion, that is a good runner himself, as well as of true courage, or else the country he is brought from is of little consequence, nor even his lineage, although he derives it from the immortal gods.

Stop

Stop here, for a moment, gentle reader, and reflect with yourself into what a number of absurdities, with respect to the ways and wisdom of providence, into how unbounded a maze of errors, with respect to our own knowledge of the nature and use of earthly beings, — into what a series of miraculous events also, with respect to their actions, this supposed innate quality in animals will lead us, considered as productive of action, when we may know, that providence has given to all of them proper parts, by means of which they can and must perform all their different motions and functions of life, and which do answer every purpose he designed them for, whether it be to run, crawl, swim or fly—But if on the contrary the action of animals does not depend on the constituent parts to them appropriated,

why

why then that line of *Horace*, which
just now occurs to me,

Delphinium sylvis appingit, fluctibus aprum,

(tho' applied by the poet to another
purpose) contains nothing in the pic-
ture, absurd, erroneous, or strange.

It is owing to this opinion of the
virtue of the blood, and what the
sportsmen call a proper cross, and an
entire inattention to, and want of know-
ledge amongst the breeders, of the laws
of nature, and the proper formation of
parts, &c. necessary to make a race-
horse, that so very few good ones are
to be found in this kingdom; and if
all our horses and mares of the racing
kind were turned loose together in one
place, I dare say, their offspring, with
the same food and care, would be full
as good, if not better, than any we
now breed by in our skill in pedigrees,
and proper crosses.

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Is

Is it not a truth to be seen every day, that the very best reputed bred horses and mares in the kingdom cannot run at all?—yet still they serve to breed from for the sake of the blood, or the cross. — Hence it is, that the breed of horses in this kingdom, is little superior to a parcel of hackneys, in comparison of what they might be, if well understood—and I think there are few of either (at least that I have seen) from whom a man of any tolerable judgment in horses, can expect to breed a good racer.—As to the mares in general, we seldom know any thing of them but their pedigree — yet we talk of the goodness and badness of stallions, as if the mare had no concern in the quality of the produce; and what is worse than this, most men who keep a stud, generally entertain a good opinion of their own mares;

fo

so when they don't produce good colts, they as generally impute the fault to the horse who got them—from such prejudices, some of our best horses often fall into the greatest disesteem as stallions.

But now it shall be allowed, that the excellence of horses consists in being of the true blood; what then? is it of any use to you, when experience shews it will not hold good in two full brothers? — But you cannot with common sense believe, nor have any reason to suppose, that the virtue of that high blood or spirit, call it what you please, which was of no effect in the father, and which would not entitle him to be a racer, should produce a better effect in the son, when this virtue is considered in the light the sportsmen use it (that is) independently of form and matter.

Behold the man fired with the same ambition as the olympick heroes in antient days—his pride, his honour, his happiness are concerned for conquest in the foot race—say that his interest is at stake also—Yet in vain shall the hero contend and struggle, in vain shall he exert the operations of his mind or spirit, if his power and parts conducive to action be deficient or inferior to those of his antagonist—grant to the horse the same pride, the same spirit of emulation, the same sense of honour, will not the case be such with him also.

Again, observe the slothful indolent horse, when heartily flogged, prevailing over his antagonist of a more willing spirit, and better disposed to go on.

These observations which I have made on the different families of race-horses,

and

and betwixt those of the same family, have made me conclude, that neither the virtue of the blood, or spirit, breed, pedigree, nor proper crossing, will enable one of them to race, unless he has a proper formation, &c. along with it.

I believe then that the origin or breed of all horses, as well as of all other things, of the same species, was the same in the beginning of time, and that all the difference betwixt the *Arabian* horses, and all others, consists in nothing else, but a peculiar elegance and formation of parts, and in having a greater share of muscular power—that is—the fibres of these muscles being driven into closer contact, horses are hereby enabled to move quicker, and with more force, that their membranes and teguments being composed of a finer and thinner substance,

stance, and their bones being smaller, of more solidity, and occupying less space, they are and can be more easily acted upon by such tendinous or muscular force—and that for a greater duration of time, with less fatigue to these acting powers.

Now these are the sole causes (proportion added thereto) of activity, as well as of strength in all animals, whether the sportsmen know it or not.

Perhaps it may be asked, what gives wind to horses, and whether the causes of that too are discoverable by the eye?

To this I answer, that clear or long-windedness depends on the very same principles in all dogs, in all horses, and all other animals, as agility of action, and ability of perseverance—namely, the nature of their constituent

or

or component parts, (particular diseases in these animals not coming into this question) for elegance of parts is, in other words, wind and strength and agility, at least it is productive of them—and as the elegance of the external texture in the horse is a certain standard or test of a similar elegance throughout the whole internal texture, so far the cause of thorough-wind-ness, as it is called, may be said to be distinguishable to the eye.

For instance, the bred-horse will gallop twelve miles within the hour, without the least fatigue, or being at all blown, but the cart horse with such a jaunt is fatigued, and tired and choaked—the reason I think is obvious to every man, namely, because his eye enables him to perceive, that one, from the nature and difference of the component

ponent parts, acts with ease and facility to himself, and the other does not.

Now may not the man be thought mad, who says, the difference in the facility of respiration betwixt these horses, depends in one upon form and matter, and in the other not? and is not he equally absurd, who says, that the difference of wind, in two bred horses of different families, does not depend on form and matter also in both, because the degrees of elegance in the component parts of these two are not so obvious to his eye, as they are betwixt the bred horse and the cart horse.

But if we could suppose two horses to be alike in health and condition, and formed and constituted alike in other respects, he that has the most capacious thorax or chest, will undoubtedly have the best wind, and this is confirmed
the by

by matters of fact, and would be known to all men, if they were not partial in their observation of things—and this too I understand to be *Virgil's* opinion, who, in his description of a perfect horse, makes this capacity of the chest a necessary ingredient; where he says,

Luxuriatque toris animosum pectus—

To this it is objected, that many running horses, with a less ample chest, have occasionally excelled others, with a more capacious one—'tis very true—this too is easily accounted for, without appealing to hidden causes—for example—one horse of a less ample chest, with great length and extent in his acting parts is to contend with another much shorter in these respects, of a more ample chest—but the organs of respiration may be more fatigued in

the last than in the first, because the long horse, who goes within his rate may act with ease and facility to himself, whilst the short one, who is forced to go at the top of his speed, and yet not able to keep company with the other, is of course distressed and fatigued in every part.

For the reasons that have been here given, the *Arabian* horses, and their descendants, when properly chosen, are preferable to all others, whether you are to be carried a mile or a thousand, either for pleasure, expedition, or safety, let the weight be what it will—nor have any other horses such true courage, or calmness of temper, nor can they bear fatigue with equal fortitude, as our severe discipline of training will in some measure help to shew.

And

And they are not only best for riding, but for drawing also, if you will breed them to size, and inure them to it early, as it is the custom to do with our horses that are designed for drawing; for our horses, whose acting powers, or sinews, are oppressed with coarse fleshy membranes, thick teguments, and large spongy bones, will on this account be much sooner fatigued and tired with their own weight, than the *Arabians*, even tho' their acting powers were equal in strength to the *Arabian* horses, which they by no means are, and that from a difference in the contexture of the muscular or tendinous fibres.

Just so it is betwixt the southern hounds, and those we make use of to hunt the fox; and yet I have heard the huntsmen talk just as ridiculously of

the blood of fox hounds, as if it was something independant of the formation and elegance of their parts, as the sportsmen do about the blood of horses.

But here the skilful huntsman differs from the sportman in one respect, for the first very often gives away, or knocks his hound at head, without trying him at all, if he does not approve his figure—whereas the sportsman always trains, if he likes the blood, let the horse be ever so defective in the formation of parts, &c. But if he would consider his racer merely as a horse, and in the same mechanical light, as he distinguishes his hunter from his cart horse, and would wave this præternatural quality, which he understands by the word blood, it would save him much expence, and many disappointments—For tho' the eye of man may perhaps not always determine,
with

with such precision, as for us to say, this horse shall make a capital racer, yet I will bold to say, that the eye of man can most frequently determine with so much certainty, (I mean amongst bred horses) as for us to say, this cannot run at all.

But this last assertion will be credited by very few sportsmen; for this plain reason — namely, because the opinion of their own judgment will not suffer them to assent to a truth, which they themselves do not perceive — for all men fancy they understand horses.

And now I am dealing in maxims, give me leave to add one more, which you may depend on for truth, and lay down as a certain criterion of the sportsman's skill in horses, namely, that the more strenuous an advocate he is for

for this innate virtue, called blood, so much less knowledge he has of the animal, and which (opinion of blood) undoubtedly is in him, not a tacit, but an open and avowed acknowledgment of his ignorance—or else he would not have recourse to occult and hidden causes, to account for facts, that are discoverable by the eye—But the word blood, received in its general acceptation, is found to be extremely convenient, because it is agreeable to the good old law of custom, from which source the generality of men's opinions are derived, and so of course, it prevents the youthful sportsman the trouble of making any enquiry into the form or nature of horses.

Again, we talk just as ridiculously of bad as we do of good blood, and it is a common saying amongst the sportsmen, that they would chuse to
breed

breed from a horse, whose blood they liked, tho' he could not run, rather than from him, that could run well, whose blood they do not like, and yet both shall be thorough bred.

Now put the case, here are two mares, both originally bred from *Arabian* horses, and mares, or the descendants of such, which I suppose is all that is to be understood by the term of thorough bred horses——one of these mares is called *Dutchess*, and is got by *White-nose*, and because the produce of this horse has been generally found deficient in racing, they are branded with the infamy of bad blood, yet *Dutchess* was an extraordinary racer—the other of these mares was got by Lord *Gadolphin's Arabian*, the best reputed blood in the world, and called *Sylvia*—she was a very bad racer—now pray fir take your choice, which
of

of these will you have for a brood mare?—why according to your own doctrine you must take *Sylvia*—can the folly and nonsense of this opinion be equal to any thing but the practice of doing it?—So if my horse or mare, who is thorough bred, and a descendant of *Whitenose*, *Stampcrab*, or any such, shall either in the first, second, third, or tenth descent, prove a good racer, (no matter from what cause) truly I must be afraid to breed from them, because you, from the prejudices you have conceived, and from not understanding any thing about horses, have been pleased to fix a mark of disgrace upon some of their ancestors.

Now by way of simile, let us suppose, that your grandfather and mine were knock-kneed—crook-legged, and splay-footed, these I think would have been but indifferent racers; but will it follow,

follow, that such defects must of necessity be for ever entailed on all their posterity? or don't you think, when any such happen to be better formed, that they would be better runners, than their splay-footed grandfathers?—mark how the size, strength, activity, shape, attitude, the beauty and regularity of their limbs and features, the spirit and temper amongst all the families of men are lost, or perhaps improved in one descent—how in all these respects this son differs from his father, and that from his grandfather?—Pray now will it, or will it not, be so with the horse and his posterity, whether you and I have discernment enough to perceive the difference there is betwixt them or not? but some difference of form must and will for ever arise in the breed and posterity of men and horses, and of all other animals, from the different form of the females, to which they

K k

and

and their descendants are occasionally joined in copulation, or else the laws of nature are of no account.

Thus you see the distinctions of good and bad blood, confined to the descendants of *Arabian* horses, and mares, are equally absurd and foolish——yet that the best and worst racers are most likely to beget such, cannot at all be doubted, and this was all that *Horace* could be supposed to mean, when he said,

Est in equis patrum virtus——

which, in plain *English*, is to say, the laws of nature are generally certain——and thus say I——but this law of nature extends both to horse and mare——so then the breeding a good racer requires a thorough knowledge of the animal, and is a matter of judgment, and not of chance, which, by relying
only

only on the blood, breed, or proper crossing, you make it to be.

Now it has been here allowed, that the *Arabians* are the best kind of horses we know of, from whom it can be expected to breed a racer, or in other words, the most perfect horse, and that the offspring or descendants of such are most likely to inherit the virtues of their progenitors; but when they are deficient in a proper formation of these acting parts, or lose the elegance or muscular substance of their progenitors, (no matter from what cause) they will, according to the degrees of deficiency, in any or all of these matters fail also, in the degrees of their performance—which truth we might see verified every day, if we were not blinded by our own prejudices, or understood any thing of the animal.

I believe also, that the *Arabian* horses of the same family do occasionally differ from each other, as much as any horses can do, in any other country of the same family; so that the possession of an *Arabian* horse, who is wanting in the respects that have been here set down, will be of little use to the owner, let the genealogy, blood, breed, or lineage of such horse, be what it will.

It is for these reasons I have asserted, and do assert, that the excellence of all horses depends on their mechanism only.

So then there is nothing in blood, —no—nothing at all, independant of form and matter, as the sportsmen say there is—But the *Arabian* horses, being better constituted for action than other

horses

horses, do by means hereof excel all others, and each other also, according to the degrees of difference in their form and constituent parts,—the nature and difference of which I have here endeavoured to explain.

But it being out of the way of sportsmen to be acquainted with the nature of bones, sinews, membranes, ligaments, teguments, and so forth, and the different effects, with respect to the laws of motion produced by a difference in these matters, it is no wonder, that the superior excellence found in some of these *Arabian* horses, has been imputed to some peculiar hidden virtue, for which there might indeed be some plea, if there was no visible difference betwixt the parts of the bred, and the half bred horse—yet I hope my reasons for differing from this ancient opinion are not the less

less true, for not having been advanced before, nor tho' all mankind should dissent herefrom.

Now, if it be asked, why the *Turks* and *Barbs* are not here spoken of, as horses proper to get racers, such as heretofore were the *Byerly Turk*, *Curwen's Barb*, the *St. Victor Barb*, and many other famous stallions, I say as I did before, that there is no difference in any horses in the world, but what is produced by food and climate—and as some *Barbs* have nearly the same elegance of parts, as some *Arabians*, or *Asiatick* horses, there is no reason, why some *Barbs*, when chosen with a proper formation, substance, &c. should not beget good racers.

If it be asked then, how it happens, that we have no *Barbs* in our days, who get good racers, I beg leave to
answer

answer that question by asking another, which is how it happens, that we have no *Arabians* or *Asiatics* now-a-days that get good racers?—why the reason is very evident, because the people of the country perceive very plainly, that those who purchase them to bring here, know nothing of the matter—and so when the *Africans* or *Asiatics* sell or make presents of their horses to this kingdom, I dare say, they send the worst they have, because they know we think it a sufficient merit in the horse, that he comes from their country—Just so the people in many parts of *Europe* are fond of *English* hunters, and if the horse comes from hence, he carries with him sufficient merit. —

But I will venture to say, there is not one in a hundred sent out of this kingdom worth a guinea, when compared to some other of our common *English* hunters, of the very same stamp——

pray

pray now may not this be true also, with respect to the horses sent here from other parts of the world—compared to one another—even tho' the worst of theirs should excel the best of ours in all respects—and if the people in other countries understand the art of breeding horses no better than we do, and consider the laws of nature as little, it cannot be otherwise—But to shew, that a proper choice of these *Barbs* and *Arabs* is a matter of judgment, and not of chance, I think it is said, that all, or most of the horses and mares brought over by Mr. *Marshall*, stud-master in the reign of Queen *Anne*, produced good racers—and I make no doubt, but any man who was a real judge of horses, and would consider them merely as such, and not be running mad after qualities independent of form and matter, that was allowed to chuse such as he liked from

from either of these countries, might bring home some as good stallions as ever came from the same countries.

As to the fine horses brought here under the appellation of *Turks*—they are real *Arabs* or *Asiaticks*; for the true native *Turkish* horse is by all accounts such as our heavy *Lincolnshire* horse.

But the Grand Seignior has a very large stud of these fine horses, of which they are so choice, that it is a difficult matter for a christian to obtain even the sight of them—and these fine horses are not bred in that country, but the emirs or governors in *Arabia*, where these fine horses grow (if I may so say) send a number of colts every year to *Turkey* for the Grand Seignior's use, which is the only tribute they pay—these being turned to grass on good land, and kept well, acquire a much larger size,

and a forehead different from the horse brought up in the desert, or the mountainous parts of *Asia*—but from the nature of their food and climate, or both, they seldom have such elegance of parts as the other.

Besides these fine horses, which the Grand Seignior has for his stud, other inhabitants of *Turkey* purchase some of these horses of the people, who trade to and from thence through the different parts of *Asia*, *Arabia*, and its borders—so that the fine horses brought hither from *Turkey*, are either the refuse of the Grand Seignior's stables, or such as are bought of the inhabitants of that country, which they do not like.

Now from the native heavy *Turkish* mares, and the fine horses brought from the different parts of *Asia*, there are as many different sorts or degrees
of

of horses in *Turkey*, as there are in *England*—where we may reckon the cart horse, the coach horse, the miller's horse, the butcher's horse, the hackney or the road horse, the hunter, and the race horse—which difference of appellation is derived from the particular uses, to which such and such horses are generally put—but their real difference is owing to the want of affinity, or the distance and nearness thereof to the *Arabian* or *Asiatick* horse.

And all these finer horses called *Turks*, and *Barbs*, and those brought up in the desert, and the more fertile parts of *Asia*, are in general easily known from each other—for instance—the horse brought up in the desert, seldom reaches, and hardly ever exceeds fourteen hands and a half—all these horses are said to have thick,

short coarse necks, and so are called by the generality of travellers, little ill-shap'd, ugly horses—and this thickness and shortness of the neck is imputed to their never being turned to grass when young; for the *Arabs*, who live encamped in the desert, and move about from place to place in search of herbage, whose home is uncertain, have it not in their power to turn out their colts in such an open wild country of so many hundred miles extent, for if they did, they could not with any probability ever expect to see one of them again—But these horses, mares, and colts are maintained with chopped straw, barley, camels milk and flour, the other cattle (breeding of which and of horses is the *Arabs* trade) eating all the herbage they can find.

—And the horses brought up in the desert are known by their temper, as

well

well as their size and figure; for being ever kept from their youth in the tents of the *Arabs*, and in the same apartments with themselves and children, they, by this familiar and domestick way of living, become as tame and passive as their dogs—and so by an indolent posture, habit of standing, and lolling about in the tents, they acquire an awkward gate, and crooked growth in some parts, which we say is very ugly—and so we conclude, that the goodness of such horses, when they get good racers, consists in some innate quality, void of form and matter—which is ever understood by the word *blood*—for instance—Lord Godolphin's *Arabian*—this horse, except his being too narrow in the bosom, and a little lengthy on his fore-legs, was in all other respects a very just horse, and more likely in my opinion to get a good racer, than any horse I ever saw,
and

and yet he was looked upon by most people in a different light, because most people judge of a horse by his fore-hand only, which in fact has nothing to do with racing nor action— one said, he was an ordinary, ill-grown ugly horse; others said, he was a lump of flesh, not knowing, that the strength of all animals is in great part derived from this flesh, or muscular substance, and the nature thereof—and so by seeing these horses in miniature, and by a careless examination of the laws of nature, and enquiry into facts, we draw false conclusions about them, as we do in general about most other things.

Now these colts bred by the *Arabs*, who inhabit the desert, are more coveted by the *Turk*, and all the rulers of his mighty empire (some of whom keep immense numbers of these fine horses)

horses) than any other horses bred in the confines of *Asia*.

It is said, that the *Arabs* keep a more exact account of the genealogy of their horses, than of themselves; yes——so they do, of such as have performed some extraordinary feats in their expeditions——and whenever they have a colt dropped of a favourite sort, they get some other *Arabs* to be witnesses and vouchers thereto, and his marks, and colour and lineage are faithfully set down in writing, the particulars of all which are attested with much solemnity when such colt is sold, and this certificate is also produced.

Now such colts are rated at a higher value than common, and hence the notion is derived, that the *Arabs* have different kinds of horses, some of which

which are (according to our phrase) of the right and true blood, and others not——pray, to what end should the *Arab* breed different kinds of horses, whose only value or use to him is swiftness and stoutness?

But all that is understood by the breed or genealogy of the *Arab's* horse by himself (however we understand it) is, that he is descended from such as have undergone the hardships of labour, fatigue, and fasting, with the utmost fortitude and resolution, and have brought him off with safety, by superior speed and perseverance in times of imminent danger, in his expeditions of plundering or defending travellers in their journey thro' the desert, for which some of them are paid by the *Grand Turk*——and such a genealogical account of their horses as this is a very rational one——it is a more certain preserving

way of estimating their value and excellence, and a likely method too of preserving a good breed—but the *Arab* has no other idea, nor ways of reasoning about the breed, lineage, or genealogy of his horse than *Horace* had, when he said,

Fortes creantur, fortibus et bonis—

The fatigue their mares are said occasionally to undergo (which the *Arabs* generally ride) is almost beyond credibility, it being affirmed, that they sometimes keep them out on their expeditions for two days and a night together, without the least sustenance, or any possibility of giving them a drop of water.

For the reasons that have been here given, some of them are valued at more than two thousand crowns, and

M m

some

some at less than two hundred—just so it is in *England*, where some of our best bred horses are sold for five hundred guineas, and some for less than fifty.

From the great regard which the rulers of the *Arabian* provinces pay to the colts or horses of such favourite sort; it should seem highly probable, that we don't get many of them here, but if we do, it is full as probable, that they are such as are not liked there; and I should be glad to know, why one of these horses, of the best repute for country and genealogy, may not happen to differ as much from some of his family and brethren in all respects, as

Conqueror did from *Othello*;

Infant from *Mirza*,

Mr. Croft's Basto from *Lord Onslow's*

Victorious,

Bold from *Lightning*,

The

The *Martindale Starling* from his full brother.

Of this kind there are numberless other examples that might be quoted—but common sense, and matters of fact, won't do for us, who are hunting back ten generations for the inherent virtues of those horses, which were lost perhaps in the last descent, or sooner, by some default in the law of nature, or want of proper skill in the breeder.

Just so it is with greyhounds and chace hounds of all sorts, amongst which one shall excel both in speed and stoutness, and his brother in neither.

If any man should here object, and say, that *Cade*, tho' he could not run

so well, got better racers than his brother *Lath*—I think the objection deserves no answer, for where *Lath* covered one mare, I dare say *Cade* covered a hundred.

And this is a true account of the horses bred and brought up in the desert, according to the relation of a sea officer, who for reasons best known to himself, lived fourteen years in the desert amongst the *Arabs*, and spoke their language, and who could have no interest at all in giving a false account of these matters—and these horses in general, that are bred and brought up in the desert, and some other mountainous parts of *Asia*, will justly claim our preference as stallions, on account of their superior elegance of parts to all other horses brought up in *Barbary*, *Turkey*, and the more fertile parts of *Asia*, even tho' they all should be of the

the same lineage, should have the same formation of parts, the same substance, and the same proportion—but no man in his senses can believe, that all the horses brought up in the desert, even those that are brothers, will always have the same formation, proportion and substance, nor even the same elegance of parts, any more than other horses, dogs or men of the same family brought up in any other part of the world—and if the difference of formation and elegance, &c. of these horses produces no effect nor difference with respect to their actions, why then it does not signify a pin, as it was before said, how any of them, or their descendants are formed or constituted, if they happen to be of the right and true family—and then also any two brothers of the same right family, ever so differently formed and constituted from each other, will ever be just as good

good as each other, (health and condition alike) which neither observation nor common sense will allow to be true.

This short account of the figure of the horses brought up in the desert, will teach us how to know them from the *Arabs* brought up in *Turkey*—and from all other horses too, brought up in the more fertile parts of *Asia*—in some parts of *Syria*, in *Turcomania*, which is the antient *Armenia*, in the principality of *Basserah*, and many other parts of *Asia*; horses are nearly of the same stamp as those of the desert, but the horses brought up in the fertile parts of *Asia*, generally arrive to a better size, tho' of less elegance, than those brought up in the desert, and some other mountainous parts of *Asia*, and by action and running about, and stretching out their necks to graze, they have different forehands, and acquire

quire a more manifest, more open and more ample shape, in some particular points, the perfection or imperfection of which, are then most easily distinguished by most men—and these horses brought up in the more fertile parts of *Asia*, have in general more elegance, than the *Arabs* brought up in *Turkey*, tho' they seldom arrive to their height—and all this difference of size, temper, figure, and elegance of parts betwixt these horses, is by all accounts the effect alone of food and climate, and manner of being brought up—for food, and manner of keeping, will produce a difference in the very same family of horses, brought up in the same climate; and I think a man, who understood horses, and the laws of nature, might undertake here in *England* to breed a horse in less than ten descents (if he should live so long) full as coarse and inelegant as the black

Lincoln-

Lincolnshire horse—and that too from the best bred and most elegant horse and mare in the kingdom, and some of their immediate descendants, by observing well the defects of nature, and by always keeping them on low wet ground, rich herbage, and by exposing them to all the inclemencies of weather.

It is affirmed by many people of veracity, that the air of the desert is so free from vapours, that there is not moisture or damp sufficient to affect the brightest gun with the least shade of rust, after laying it abroad the whole night.

The different effects then of humid or dry air are worth observing; if you hang up a cord or string of any kind, it becomes contracted or relaxed, according to the degrees of humidity or dryness of the air.—What else is the finew
of

of a horse but a cord or string, composed of many threads or fibres? — from such temperature of the air, the sinew of the mountain *Arab* is like a bar of iron; hence the degrees of difference betwixt him and some other *Asiatick* horses, and all other horses of the world, the nature of the food considered also.

But we understand so little about the matter, that these very horses are called weak cat-legged things, and our great coarse brutes, with hairy legs, thick skins, and lax fibres, are esteemed much the strongest, by ninety nine men in every hundred throughout this kingdom.

As to the *Barbs*, I mean those only which I have seen, all have a particular cast or turn in their hinder parts, from which they may in general be easily known by an observant eye.

N n

And

—And now having settled this matter with myself, I leave the sportsmen to consider, whether the excellence of horses depends on form and matter only, or on something else, of which they can give no account——But I would fain recommend it to other breeders, for their own good, and that of the community, to think of substance, proportion, elegance and formation of parts, as the only law, whereby the actions of all animals can be performed, without a manifest contradiction to the general laws of nature, and the ways and wisdom of providence——and the breeder by studying these matters will have more merit, more certainty, and more pleasure too, in breeding a good horse, than when he relies on any thing else, which at best amounts to chance only.

Yet

Yet I fear my doctrine, tho' ever so true, will produce but little good, because it is almost impossible, thoroughly to understand wherein the perfection of the horse consists, without understanding in some measure the nature and use of his component parts—and something also concerning the laws of anatomy and mechanicks.

Now the attachment of some men to a half-bred, or what is commonly called a good *English* horse, is, I think, full as absurd, as the opinion of the sportsmen about blood—they object, that these cat-legged things (as they are pleased to call bred horses, whose legs in general are by the bye a great deal larger than they appear to an injudicious eye) are fit for nothing but the race—that half-bred horses will lose them on some roads with a heavy weight—

that they go near the ground—are apt to blunder—are long pasterned—and have an aukward way of going.

To the first I answer, that if any man be willing to match a horse, which he will certify to be half-bred, against another certified to be thorough bred, I will undertake to find him a play-fellow, that will entertain him for what sum he pleases, and the owner of the half-bred horse shall chuse his ground, length and weight.

But the man who never saw bay Bolton, Atlas, Tartar, and many others that might be named, may perhaps think, there are no bred horses of strength and size, and substance, sufficient to struggle with deep roads, and heavy weights.

To

To the next objection, that bred horses go near the ground—I answer, that the generality of such having been trained from their youth on a smooth surface, some of them do go near the ground, but this, in my opinion, is partly owing to the nature of the ground, education and fatigue in their tender years, and partly to the manner of setting on the arm, and is not the certain consequence of being a bred horse, because there are many bred horses, who, with this same education and use, do not by any means go near the ground.

As to blundering, it is very absurd to suppose, that the bred horse as such, is less sure-footed than the other, for besides his having more agility, strength, and true courage than the other; the very formation of parts, will indicate the

the contrary—for not to say any thing about setting on the arm, or the rules of proportion from the elbow to the knee, and from thence to the fetlock, nor the formation of the knee itself, these bred horses having in general more depth and declivity in their shoulders than others, they can most certainly better extend, and elevate their fore feet, *cæteris paribus*—and by the curve or circular figure, they do or should make with their hinder legs—they, as certainly can stand more securely on all kinds of ground—whilst the generality of our *English* horses, stand upon four sticks or uprights, that seem, as if they were designed rather for props of support, than for extent or action—and the advantages of this declivity in the shoulders of horses will be farther explained, by observing with what facility, both to themselves and the rider, such go down the steepest hills,

hills, with the utmost precipitancy and safety, whilst other horses, who want this declivity in the shoulders, rock and rowl about on such steep ground, to their own terror, as well as that of the rider, if he happens to have the sense of feeling.

With respect to the length of the pastern, even for common riding, where expedition may not be required, there is just as much difference in point of ease to the rider, betwixt a long and a short pasterned horse, as there is betwixt riding in a carriage that is hung upon springs, and one that is not—yet I do not think it necessary, that one of these bred horses should be as long pasterned for the road or hunting, as for racing—but he will undoubtedly stand more securely on his legs, by having lax and springy pasterns (all other parts alike) than by having them stiff, and

and upright, both which circumstances must of necessity appertain in degree at least to short pasterned horses.

As to the mode or manner of going, it scarce deserves any answer, tho' all that can be said will make against the half-bred horse.

These objectors say, that there is not one bred horse in fifty, who does his paces well; to which I answer, there is not one half-bred horse in five hundred that does his paces well; but ever body knows, or may know, that a half-bred horse, who is ever so well put together, and does not go well, will soon tire, and is not worth sixpence for riding; but the mode or manner of going in a bred horse, if he be well put together, is perhaps of little consequence to his goodness, (at least that we can be sure of) there having been
many

many instances of exceeding good racers, who were very aukward goers, of which *Sterling* will serve for one proof—and therefore I take upon me to say, in contradiction to the opinion of all the good judges in this kingdom, of every denomination, of which there are as many in number within one or two, as there are men — that the aukward manner of going in a bred horse, that is well grown, and used only for the road or hunting, does not signify a pin—provided he goes above his ground and gets along—And such a horse, (equally master of my weight) I would prefer to the best goer in the kingdom, that was but half-bred—and farther, I look upon a half-bred horse as a brute and a beast, that no man of property, who understood horses, would ever use at all, if he had, or could get any conveniency for breed-

ing—perhaps it may be said, that it is no easy matter to raise bred horses to height and substance, proper for every purpose—this I conceive to be a mistake, and is, what depends in great measure on the judgment of the breeder, and his knowledge of the laws of nature—witness the late Duke of *Bolton*, whose horses in general were victorious on the turf, masters of any weight in the chace—and fitter for the coach too than any other horses I ever saw, either for expedition, length of journey, or both.

But if these objectors to the thoroughbred horse want to decide these matters by the examples of such refuse, as are turned out of training, I do not agree to it, for I propose not to give any advantages of form, substance, or proportion, but my design is to shew, that the thoroughbred horse, when properly

properly chosen, is, for every purpose, far superior to him that is half-bred, and that for the same reasons, that the cat-legged stag excels the bullock, the fox hound excels the southern hound, and the fine setting dog the *Spanish* pointer.

And why this superiority in the bred horse is not equally believed by all men, is, because the difference in the nature of their constituent parts is not equally understood by all men—which also is the very reason (as was before said) why the sportsmen have always imputed this superiority, in what we call the bred horse, to some innate or hidden cause.

Let us return to the use of salt.

Now this medicine externally applied is a great discutient, and inwardly taken a great deobstruent.

From this deobstruent quality of salt it stands recommended to the world; but if any man is acquainted with one that is more so, he would be highly culpable not to use it.——Nor am I so partial an advocate for this medicine, as to think it incapable of improvement, by being joined to some other; for antimony added to nitre will make it a more powerful deobstruent, and a more efficacious medicine in all diseases befalling the horse.

If then we take two parts of nitre, and one of crocus metallorum, first rubbed together, and deflagrate them over a fire in a crucible, by putting in a little at a time, we shall have a medicine nearly analogous to Dr. James's powder—one or two ounces of which may be given once or twice a day, as occasion may require.

This

This will be found a very potent remedy in the farcey—in cutaneous diseases—local swellings—where the juices are viscid—and the circulation is become languid—loss of appetite—in plethorick—in bilious complaints—where the blood is depraved by any antecedent fever—in the inflammatory cholick—and all inflammatory disorders—in obstructions of the urinary passages, and all others—in epidemical diseases, or what is called the distemper amongst cows and horses—in coughs, colds, sore throats, in fevers of every kind, and many chronical disorders—for this medicine attenuates the fluids, and promotes secretion and excretion more copiously—hence obstructions productive of disease are removed, and the animal is restored to his pristine health—to this deflagrated nitre and antimony, other cooling neutral

neutral salts may be added with great propriety on all occasions, where the first shall be thought proper.

If any man should wonder at, or object to the virtue of salts and antimony, considered in such a universal light, I desire he will consider and remember too, that in the diseases, which befall horses, the fluids only are in general concerned, which is owing to the sameness and simplicity of their food—hence too, the viscosity of their fluids is more easily removed, hence their diseases are less complicated, less various, and less intricate, than in the human species, whose luxurious and unconfined repasts have produced such a number and variety of complaints, as perplex and puzzle the most nice enquiry.

But

But least I should be thought too fond of the virtues of salt; with respect to its general efficacy, I should be glad to know wherein consists the virtue of all the waters of the world, but in the salt which they contain; the water itself having no more effect, than any other common watery vehicle.—Hot ones indeed (whilst they remain in a state of heat) may perhaps be impregnated with other materials also.

Hence the physician, having long in vain drenched the sickly mortal with every drug the world affords, sends him at last to drink some kind of water, that happens to be most in fashion.—Now the salts of different waters differ in their nature and effect, whereby different constitutions are diversely affected.—Hence the patient of the son of *Æsculapius* is often left, like the farriers, to be cured by chance.

—*Quid*

—*Quid rides? mutato nomine, de te
fabula narratur.*—

But tho' men, as well as horses, often die of the doctor, yet there are many worthy practitioners in this kingdom, whose integrity, judgment, and observation, do honour to themselves, and benefit to mankind,

Now the author has told his tale in as concise a manner as he well could, being inclined to edify, rather than puzzle the reader, by multiplying useless words and medicines, or by enumerating diseases that do not exist at all, but in the imagination of authors, who thought themselves obliged to treat of every disorder they had ever heard of incident to man, as if they believed the horse was afflicted with all such—this conciseness will save
both

both writer and reader some trouble, which is a matter of no small consideration; and the author is of opinion, that he has done more good in bringing the practice of physick with respect to horses into this narrow compass, than if his book had been furnished with a greater number of receipts and medicines—And if the medicines given to Mankind were also brought into narrower compass, he humbly conceives (with all deference to the learned) it would be no detriment to any but those who sell them.

He has endeavoured to treat this subject as clearly as he could, tho' no method of treating diseases or wounds can be so clear or precise, but that much will depend on the judgment of the practitioner. — In the one case, from appearance and locality; in the other, from the occurrence of vari-

ous symptoms often annexed to the same disease; in both, from habit of body,

And if the practitioner should ever find his purpose not answered in having given any of the medicines here recommended, I must beg the favour of him to think, that it may possibly be owing to his want of skill in the proper use and management of them; and to consider, that the reading of any one or ten physical books (though ever so perfect) will never make a man an able physician, the skill of such a one consisting as much in his observation of the attempts of nature, a thorough knowledge of the animal economy, and a proper application of the remedy, as well as to know the virtues which do belong to it. — Add to this, the symptoms may sometimes be taken for the disease, and the disease for the symptoms. — Again, some diseases

diseases from having the same appearance may be mistaken for each other, as has been shewn in the case of the *Botts*. Moreover, medicines given to a horse, that may from his particular constitution disagree with him; such for instance, as nitre (the least quantity of which some men, and some horses, are utterly unable to take without sudden bad effects) may bring on new symptoms utterly unconnected with the disease, and for which there is no possibility of laying down any certain proper treatment, and yet this is not owing to, nor ought to be imputed to any fault in the medicine, but to the particular habit of body in those who take it, which no human wisdom can foresee.

Again, it is a general custom, when horses have colds or fevers, to load them with a vast quantity of superflu-

ous cloaths, but this encreases the impetus of the blood, and accelerates its motion—hence ensues an encreased contraction of the vessels, and an impeded secretion and excretion of the fluids, so that incisions made in the skin of a horse ill with a fever, will not afford so great a discharge, as they would otherwise do, neither will he be so much relieved by bleeding, when this practice of loading him with cloaths is made use of—for these reasons also, all medicines that are of a heating quality given to the horse in a fever are improper, and must do harm.

But there is less skill required in treating properly the diseases of horses, than of men; for tho' horses cannot tell their complaints as men can, yet their diseases are more easily known, and better understood by a nice obser-

ver,

ver, because they are less complicated, and less various, and that for the reason before given, namely, the nature and sameness of their food.

And now, gentle reader, if you have ever read much on this subject, you have also read of many other diseases incident to the horse, besides what are contained in this little book; but for my own part, who am ever ready to confess my failings, I acknowledge, that I have not been able to discover any other (few excepted) than what have been here treated of; but I can readily believe, that a horse may have tumours internally, encysted, and other; that he may have diseases of the omentum, and of the blood vessels, attended with ruptures of the same.

But I hold it vain, to trouble the reader with an account of diseases that will

will admit of a very uncertain, or no remedy, tho' managed perhaps with the greatest skill. — Yet I hear there is a treatise compiling on this subject, which, they say, cannot be contained in less than ten volumes; therefore I take it for granted, that it is not an incompleat one, like mine; but if the number of medicines to be given the horse, should be equal to the number of diseases, which, from the quantity of the work may be supposed to be contained therein, I shall be heartily concerned for this most noble animal, for whom I have long had a particular friendship, from the many virtues I have discovered in him.

There is another disease indeed incident to horses, called the glanders; the nature, cause, and feat of which may perhaps be published hereafter.

OBSERVATION I.

That the generality of lameness in the fore part of the horse derives its cause from the improper methods of shoeing, and treating the foot.

II.

That such lameness, tho' the cause be not visible to a common observer, nor understood by such as are unacquainted with the nature and use of the parts, and therefore commonly mistaken, and so deemed incurable, may be most frequently cured.

III.

That the custom amongst farriers, of applying remedies to the different parts of a lame horse at the same time, is a certain proof of their ignorance, and a manifest confession of not understanding the true seat of the complaint.

IV.

IV.

That from the great dislike all farriers have to flat or short shoes, every lameness in the horse is by them ever imputed to such shoes — be the real cause what it will — few men believing there is any advantage in what they do not already know, or have not been accustomed to.

V.

That short shoes often prevent cutting either behind or before.

VI.

When the finew of a horse is relaxed, or elongated, or what we call let down, make two incisions thro' the skin below the diseased part, and keep them running, taking care not to wound the sheath or fibres of the tendon — apply to the relaxed part alum, curds and whey, or the salt cataplasm,

with

with a smooth bandage — thus many a horse has been effectually cured after having been blistered and fired to no purpose—Thus have I known too many a heavy stag-hound, that was quite let down behind, and went upon his hocks, to be cured, and afterwards run in the pack, only by making an incision in the skin, and filling it with salt.

VII.

Where bleeding and rowelling are directed to be used together, it is not intended, that bleeding should be used after the rowels have begun to discharge well, nor will there be any occasion for it—But before the rowels have begun to discharge, and the symptoms appear dangerous, then repeated bleeding may be allowed of, and will be often necessary—for the horse may otherwise die, before the rowels can possibly take effect.

VIII.

That in vertiginous or convulsive disorders—opiates ought to be given, if any such symptoms remain, after the fever is gone off, and proper evacuations have been previously used.

IX.

That in cutaneous diseases about the neck or body of the horse, not submitting to gentle purges, and alterative medicines, blistering the part will sometimes be of use.

X.

That in cold watery swellings, or the grease, castile soap and yellow resin, may properly enough be given, mixed with the deflagrated nitre and antimony, and other neutral salts, first emptying the intestines by a gentle purge—but where there is any degree

of inflammation attending a swelling, resin will be an improper medicine.

XI.

That there is a certain degree of skill required in the use of such diuretick medicines, (as well as of all others) for if the urinary secretions are too much enlarged in such complaints, where the horse's blood is already poor and thin, the disease will be increased, rather than lessened.

XII.

That the farriers, coach masters, hackney-men, horse-keepers, dealers, and all other persons, may be furnished by the Author with medicines, that are an effectual cure in recent coughs, colds, convulsions, staggers, fevers, and inflammatory disorders of all kinds, and with medicines proper for horses in all other complaints, as cheap as at any chymists, which the sportsman may

may carry with him into the country
—with directions how to use them.

Blenheim Street, in
Bond Street.



That the use of such di-
rective medicines (as well as of all
others) for it the urinary functions are
too much enlarged in such complaints,
E R R A T A.

Page 20. Line 8. for inevitably read inevitably. — P. 58. l. 1. for ulceration r.
3. for linaments r. liniment. — P. 221. l. 6. for Thoutneis r. Thoutneis. — P. 222.
I. 16. for hinder of it r. hinder part of it. — P. 223. l. 5. for
leg r. legs. — P. 244. l. 16. for light r. light.

XII.

That the farriers, coach makers,
hackney-men, horse-keepers, dealers,
and all other persons, may be furnish-
ed by the Author with medicines, that
are an effectual cure in recent coughs,
F I N I S.

colds, convulsions, staggers, fevers, and
inflammatory disorders of all kinds,
and with medicines proper for horses
in all other complaints, as cheap as at
any chymists, which the sportsman
may